

TA-AV521/AV621

SERVICE MANUAL

US Model



PHOTO: TA-AV521

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm loads, both channels driven, from 40 - 20,000 Hz; rated 135 watts per channel minimum RMS power, with less than 0.9% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Power bandwidth (IHF) 30 Hz - 30 kHz (8 ohms)
Dynamic headroom 1.7 dB (*78 IHF)
Harmonic distortion Less than 0.9% at rated output (Surround OFF)
Frequency response PHONO: RIAA equalization curve
CD, VIDEO, TUNER, TAPE: 10 Hz - 50 kHz ± 3 dB
Rear output 15 W + 15 W (at front off 8 ohms)
Center output 30 W (at front off 4 ohms)
Damping factor 27 (8 ohms, 1 kHz)

Input

Input jack	Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	Phono	3.0 mV	50 kilohms	71 dB 75 dB* (A, 3.0 mV)
CD, VIDEO, TUNER, TAPE	Phono	250 mV	50 kilohms	92 dB 83 dB* (A, 250 mV)

*78 IHF

Output

TAPE (REC OUT)	Phono jacks	Voltage 150 mV Impedance 1 kilohm
SPEAKERS (Front, Rear)	—	Accepts speakers of 8 - 16 ohms
SPEAKERS (Center)	—	Accepts speakers of 4 - 16 ohms
HEADPHONES	Stereo phone jack	Accepts low and high impedance headphones.

Tone controls

BASS: ± 10 dB (100 Hz)
TREBLE: ± 8 dB (10 kHz)

General

Power requirements 120 V AC, 60 Hz
Power consumption 250 W
AC outlets 3 switched, 120 W/1 A max.
Dimensions Approx. 430 x 145 x 360 mm (w/h/d)
(17 x 5 $\frac{3}{4}$ x 14 $\frac{1}{4}$ inches)
Weight Approx. 9.9 kg (21 lb 14 oz)
Accessories supplied Remote Commander
RM-U521 (1) (TA-AV521)
RM-P322 (1) (TA-AV621)
Sony batteries SUM-3(NS) (2)

Design and specifications are subject to change without notice.

INTEGRATED STEREO AV AMPLIFIER
SONY

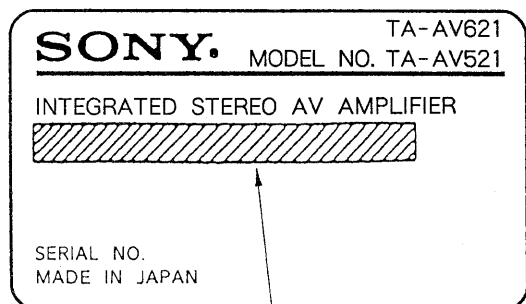


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MODEL IDENTIFICATION

— Specification Label —



AC 120V ~ 60Hz 250W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

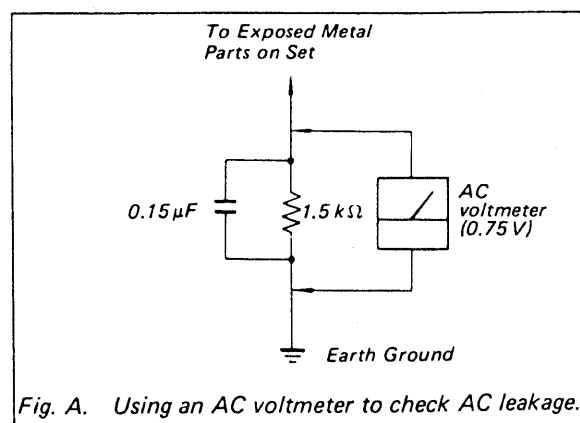


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1 GENERAL

• TA-AV521 MODEL

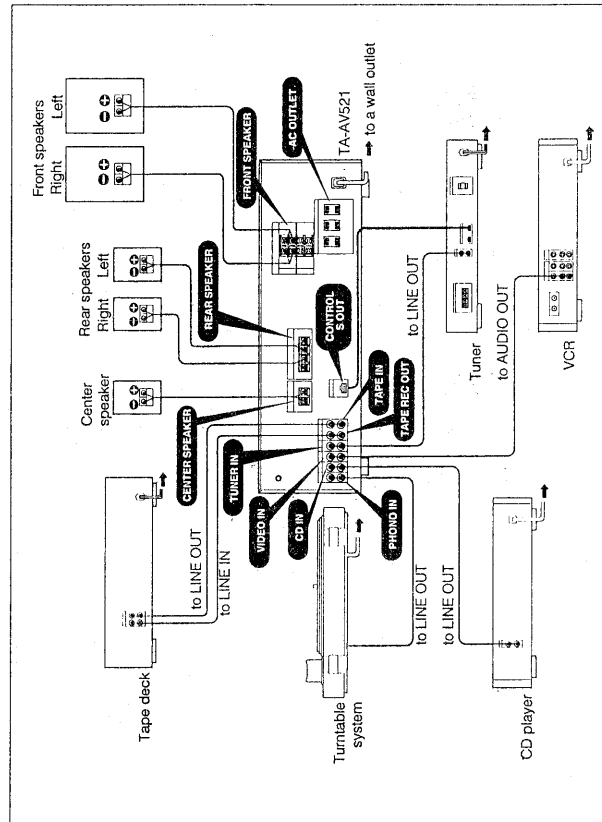
This section is extracted from
TA-AV521 instruction manual.

Hooking Up the System

At first, this section describes about the connections with the other audio/video equipments and speakers. After that, it also shows about the remote control system and AC outlet.

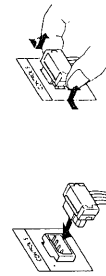
- Connect the AC power cord last. Make sure power is off.
- Jacks and plugs of the connection cord are color-coded as follows:
Red jacks and plugs: For the right channel of audio signals
White jacks and plugs: For the left channel of audio signals
- The cable connectors should be fully inserted into the jacks. Loose connections may cause hum and noise.

Connecting Audio Equipment



CONTROL S cord (not supplied)

Connect the CONTROL S IN jack of other Sony equipment with the CONTROL S cord for whole audio system remote control.



Push in until it clicks.
To disconnect

AC OUTLETS (SWITCHED)

Use these to power audio component whose power consumption is less than the wattage indicated on the AC outlets. These outlets are controlled by the SYSTEM POWER switch on the front panel.

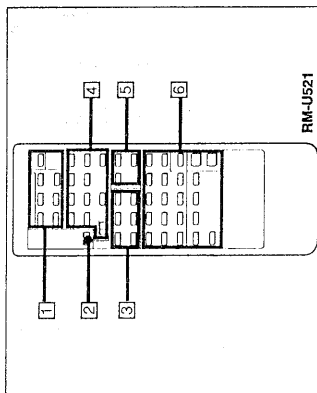
CAUTION

Do not connect any electrical home appliances such as an electric iron, fan, TV or other high wattage equipment to these AC outlets.

5

Remote Commander

The remote commander supplied with this unit can control the unit from a distance. The remote commander is divided into 6 sections according to the functions as shown below.



1 Power control block

SYSTEM OFF button: Turns off the power of the whole system: LDP, VTR, TV, and AUDIO.
LDP/VTR/VTR2/VTR3/TV/AUDIO POWER buttons:
Control the power of each unit.

2 MODE selector

Selects the function mode on the remote commander.
1: To select the functions indicated in light gray such as DECK, DAT, CD player and the SURROUND mode of amplifier.
2: To select the functions indicated in blue such as VTR, LDP (Laser disc player) and TV.

3 CDP/LDP control block

The combined CDP/LD player can be controlled with LDP position.

- ▶: Play
- ⏸: Pause
- : Stop
- D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
- ◀◀◀: Manual search (only for LD player)
- ◀◀◀: Locates a desired selection.

4 Tape deck/VCR control block

DECK/VTR selector
DECK A, B, and DAT: Selects Deck A, B or DAT deck.
VTR 1, 2, and 3: Set to the VTR 1, 2 or 3 according to your VCR setting.

- 1: Betamax VCRs
- 2: 8 mm VCRs
- 3: VHS VCRs
- ⏸: Pause
- : Stop
- ◀◀◀: Fast winding
- ▶▶▶: Play

Battery life

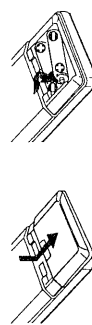
About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries.
When the batteries are exhausted, the commander can no longer operate the unit. Replace both batteries with new ones.

To avoid battery leakage

When the commander is not to be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Inserting the batteries into the remote commander

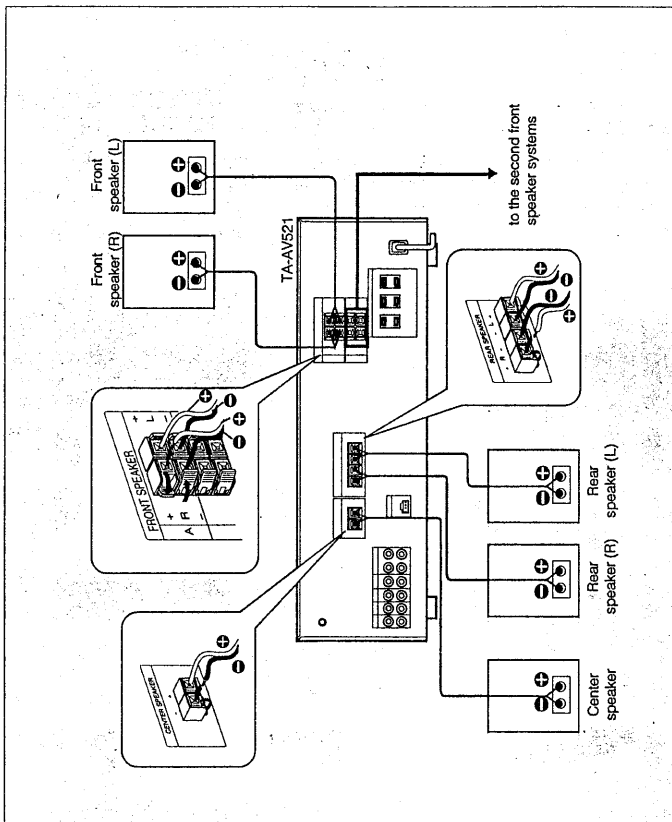
- 1 Open the cover.
- 2 Insert two size AA (R6) batteries with correct polarity.



• TA-AV521 MODEL

Hooking Up the System

Connecting Speakers



Note on speaker impedance and power capacity
This amplifier is designed to work best with speakers of nominal impedance from 8 to 16 ohms (Center speaker: from 4 to 16 ohms). Be sure to use a speaker system with adequate power handling capability.

Note
When connecting the speaker cord to the speaker terminal, make sure that the polarity (+ and -) of the speaker cord is correct. If the polarity is reversed at either speaker, the sound will be distorted and will lack bass.

Front speakers
Connect the front speaker systems to the FRONT SPEAKER A or/and B terminals. They can be selected individually or simultaneously with the SPEAKERS selector.

Rear speakers
Connect the rear speaker systems to the REAR SPEAKER terminal for enjoying surround sound.

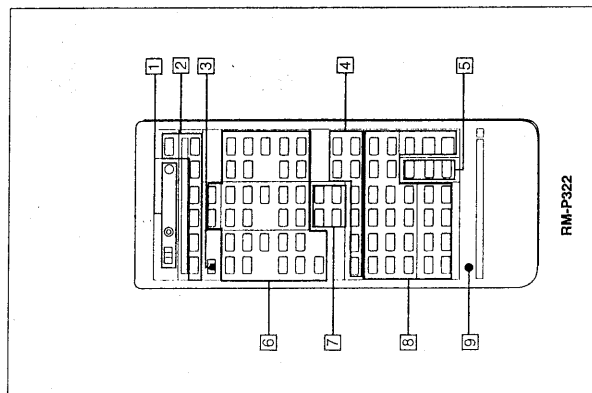
Center speaker
You can connect a center speaker to the CENTER SPEAKER terminal for enjoying surround sound. The sound such as a dialog comes from the center.

• TA-AV621 MODEL

This section is extracted from
TA-AV621 instruction manual.

Remote Commander

The remote commander supplied with this unit can control the unit from a distance. The remote commander is divided into 9 sections according to the functions as shown below.



1 Program control section

Mode selector and indicator:
SONY STD: To control Sony equipment.
USER STD: To control equipment whose remote control functions are stored.
LEARN: To store functions of other remote commanders emitting infrared rays.
PROGRAM CLEAR button: Clears the stored functions.

2 Power control section

SYSTEM OFF button: Turns off the power of the whole system: LDP, VCR, TV, and AUDIO.
LDP/TV/IR/2X/IR3/TV/AUDIO POWER buttons: Control the power of each unit.

3 MODE selector

Selects the function mode on the remote commander.
1: To select the functions indicated in light gray such as DECK, CD player and surround mode of amplifier.
2: To select the functions indicated in blue such as VCR, LDP and TV.

4 CD/LD player control section

The combined CD/LD player can be controlled with LDP position.
D.(disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
▶: Play
⏸: Pause
■: Stop
◀◀◀: Manual search
◀◀◀i: Locates a desired selection.

5 Tuner control section

SHIFT button: Selects a memory page.
TUNER PRESET +/- buttons: Select a preset station.

6 Tape deck/VCR control section

ANT (antenna) TV/VTR buttons: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
VTR CH (channel) +/- buttons: Select channel on the VCR.
◀◀◀: Fast winding or forwarding
◀◀: Recording
▶: Play
■: Stop
⏸: Pause
C (cassette) SKIP: Cassette skip (for a cassette deck equipped with a multi-cassette changer)
REC MODE REV/FWD buttons:
For reverse recording, press REV and ● together.
For forward recording, press FWD and ● together.

7 CD SYNCHRO (CD synchronized recording) section

(The playback of the Sony CD player equipped with a remote commander and the recording of the cassette deck can be performed simultaneously.)
SYNCHRO: Press to start recording of the cassette deck equipped with the multi-changer and then playback of the CD player.
STAND BY: Press to set the cassette deck to the record-standby mode.
START: Press to start recording of the cassette deck and then playback of the CD player.
STOP: Press to stop the recording of the cassette deck and playback of the CD Player.

8 Amplifier/TV section

TV/VIDEO button: Selects the input signal of the TV. (for TV)
Program number (1 to 0) and ENTER buttons: Select the channel. (for TV)
SURROUND mode selectors (for the AV amplifier)
ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode.
T.(test) TONE: Outputs test tone to each speakers in succession.
DELAY: Adjusts the delay time.
FUNCTION selectors: Select an input source of the AV amplifier. (for the AV amplifier)
(The VIDEO 2, 3 and 4 do not function. When the VIDEO 1 button is pressed, the AV amplifier enters the VIDEO mode.)
CENTER VOL./TV VOL. +/- buttons: Control the volume of center speaker or TV. (The CENTER VOL. +/- buttons function for the AV amplifier.)
REAR VOL./TV CH +/- buttons: Control the volume of rear speakers or channel of TV. (The REAR VOL. +/- buttons function for the AV amplifier.)
DBFB button: Turns on/off the DBFB (Dynamic Bass Feed Back). (for the AV amplifier)
MASTER VOL. +/- buttons: Control the amplifier's master volume. (for the AV amplifier)

9 Reset button

Reset the commander to the initial state.

Note on the ● (recording) button under 6 Tape deck/VCR control section

If your recorder is of such type as pressing ● puts it in recording pause mode, first press ● on this commander and then II.

Note

The ◀▶ (play) buttons in 6 and 8 and the SHIFT button, PRESET +/- buttons in 8 and CD SYNCHRO buttons in 7 can function without pressing one of the FUNCTION buttons in 8.

Inserting the batteries into the remote commander

- 1 Open the cover.
- 2 Insert two size-AA (R6) batteries with correct polarity.



Battery life

About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries.
When the batteries are exhausted, the commander can no longer operate the unit. Replace both batteries with new ones.

To avoid battery leakage

When the commander is not to be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.

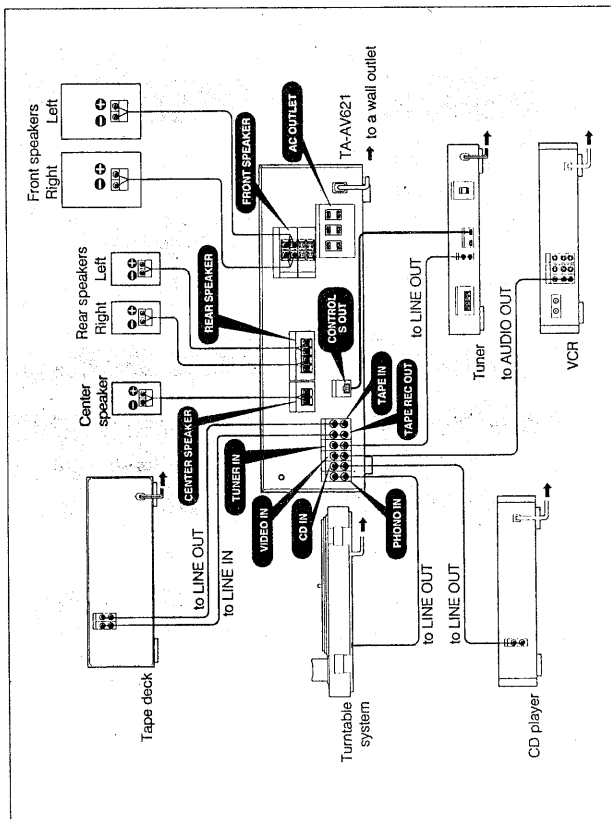
To avoid malfunction of the remote commander

Avoid keeping the remote commander under extremely hot or humid locations.

Hooking Up the System

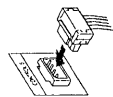
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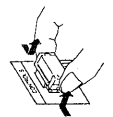


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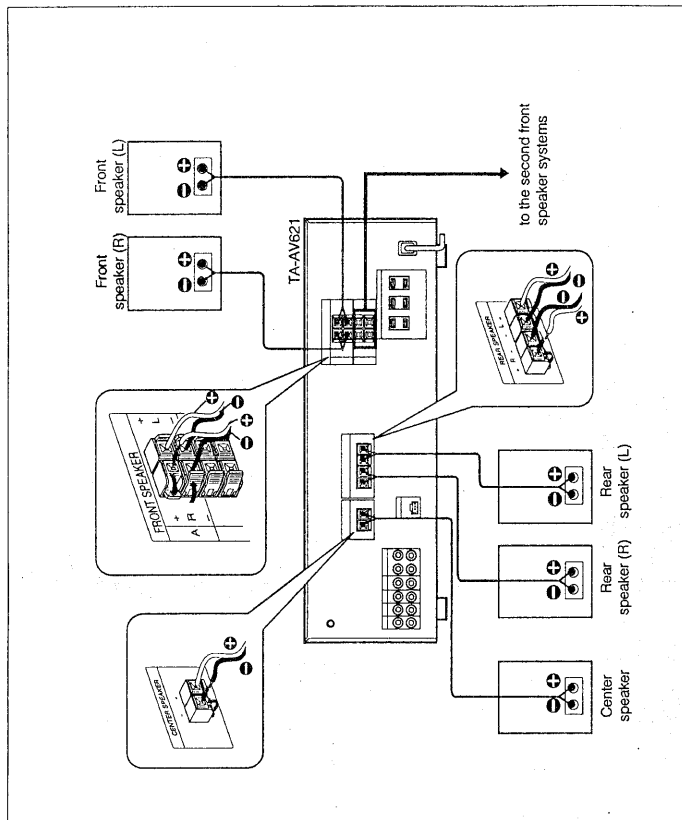
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Note on speaker impedance and power capacity

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Note

When connecting the speaker cord to the speaker terminal, make sure that the polarity (+ and -) of the speaker cord is correct. If the polarity is reversed at either speaker, the sound will be distorted and will lack bass.

SECTION 2

DIAGRAMS

2-1. IC DESCRIPTION

• IC101 (μ PD75206GF-722-3BE)

Pin	Port	I/O	ACT	RESET	Outside	
1	RESET	I				
2	t0	O	H	High	L	DIGIT2
3	t1	O	H	High	L	DIGIT1
4	t2	O	H	High	L	DIGIT3
5	t3	O	H	High	L	DIGIT4
6	t4	O	H	High	L	DIGIT5
7	t5	O	H	High	L	DIGIT6
8	t6	O	H	High	L	DIGIT7
9	t7	O	H	High	L	DIGIT8
10	t8	O	H	High	L	DIGIT9
11	t9	O	H	High	L	NC
12	t10	O	L	High	L	REAR MUTE
13	t11	O	L	High	L	FRONT MUTE
14	t12	O	L	High	L	V-2 (NO USE)
15	t13	O	L	High	L	V-1 REC (NO USE)
16	t14	O	L	High	L	SURROUND A
17	t15	O	L	High	L	SURROUND B
18	Vload		—	High		— 30V
19	vpre		—	High		— 4V
20	s9	O	H	High	L	DBFB
21	s8	O	H	High	L	SEG1
22	s7	O	H	High	L	SEG2
23	s6	O	H	High	L	SEG3
24	s5	O	H	High	L	SEG4
25	s4	O	H	High	L	SEG5/KEY OUT 5
26	VDD			High		+ 5V
27	s3	O	H	High	L	SEG6/KEY OUT 4
28	s2	O	H	High	L	SEG7/KEY OUT 3
29	s1	O	H	High	L	SEG8/KEY OUT 2
30	s0	O	H	High	L	SEG9/KEY OUT 1
31	p00	I	H	In	L	STOP
32	p01	I	H	In	L	KEY IN 2

High : High-impedance status

In : Input status

Pin	Port	I/O	ACT	RESET	Outside	
33	p02	I	H	In	L	KEY IN 3
34	p03	I	H	In	L	KEY IN 4
35	p10	I	H	In	L	KEY IN 5
36	p11	I	H	In		RM-IN 1
37	p12	I	L	In		KEY IN 1
38	p13	I	L	In		POWER SW
39	p20	O	H	In	L	ST LC7535/LC7822
40	p21	O	L	In	L	ST LV1001M
41	p22	O	H	In	L	VOL +
42	p23	O	H	In	L	VOL -
43	p30	O	H	In	L	VIDEO A
44	p31	O	H	In	L	VIDEO B
45	p32	O	H	In	L	VIDEO C
46	p33	O	H	In	L	AUTO LED
47	p60	O	H	In	L	CD CONTROL (NO USE)
48	p61	O	H	In	L	CLOCK
49	p62	O	H	In		DATA
50	p63	O	H	In		FRONT SP RELAY
51	p40	O	H	In	L	REAR SP RELAY
52	p41	O	H	In	L	CENTER SP RELAY
53	p42	O	L	In	L	CENTER MUTE
54	p43	O	H	In	L	POWER RELAY
55	ppo	O	H	In	L	P LOGIC 1
56	x1					
57	x2					
58	Vss					
59	xt1					
60	zt2					
61	p50	O	H	In		P LOGIC 2
62	p51	O	H	In		P LOGIC 3
63	p52	O	H	In		P LOGIC 4
64	p53	O	H	In		P LOGIC 5

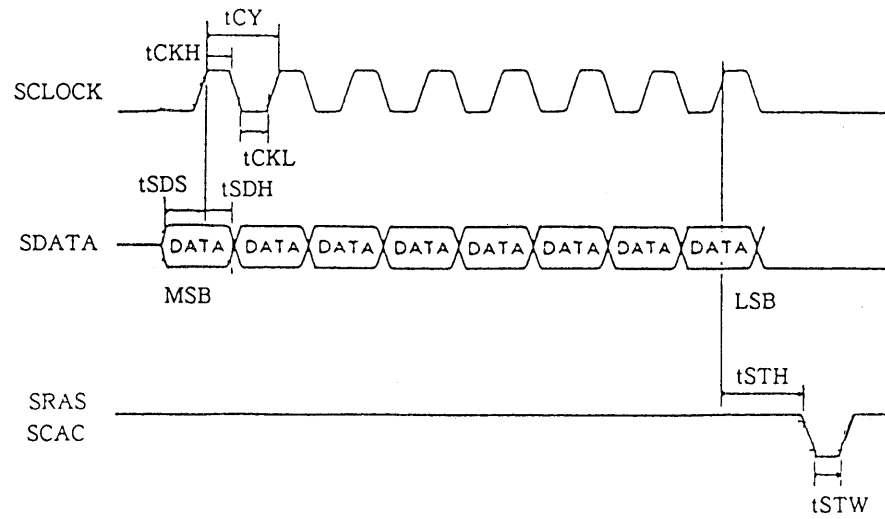
High : High-impedance status

In : Input status

• IC304 (LV1001M)

Pin No.	Explanations
1	De-couple capacitor for threshold voltage
2, 64	Capacitor for smoothing of rectifier output
3	Capacitor for sliding band filter and Delayed output
4, 62	Capacitor for sliding band filter
5, 61	Capacitor for pre-emphasis
6, 60	Input filter for rectifier
7, 57	Input filter for rectifier
8	Reference voltage
9	Reference voltage
10	Mute control
11	Vcc
12	Output for V _{DD}
13	Clock input for serial input, data input for parallel input mode
14	Data input for serial input, data input for parallel input mode
15	Column address selection for serial input, data input for parallel input mode
16	Row address selection for serial input, data input for parallel input mode
18 to 32	Connection to memory device
24	Vss
33	X'tal resonator for oscillator
34	X'tal resonator for oscillator
35	Long or Short mode selection
36	Serial or Parallal mode selection
37	For test mode
38	Smoothing for NR rectifier
39	Smoothing for NR rectifier
40	Capacitor for weighting on side chain path
41	Input for variable resistor
42	NR output
43	7kHz low pass filter output
44	Input for NR
45	Capacitor for de-couple on NR
46	Delay output or NR output
47	Input for mute circuit
48	Output for mute circuit
49	Output for 7kHz low pass filter
50	Input for 7kHz low pass filter
51	GND
52	Input for right channel
53	Input for left channel
54	Capacitor for de-couple on Fixed matrix output
55	Noise shaping and delay input
56	Noise shaping output
57	Delay input signal mode select switch (L + R/L - R)
58	Filter for supply voltage on comparator
63	Capacitor for sliding band filter and local decoder output

Input Address Port Timing
SHORT MODE

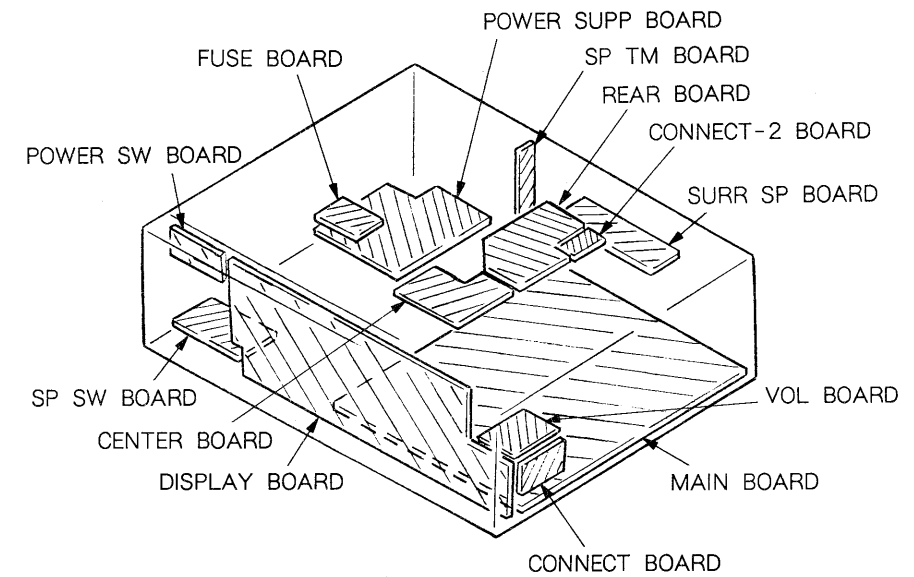


In case of short mode, delay time setting is set in above timing. The data loaded to SDATA is written on the leading edge timing. In order to select that the data latch for row address strobe or column address strobe is loaded, SRAS or SCAS port is controlled.

When changing delay time setting, meaningless data on a memory are read. this causes the pop noise. when SRAS or SCAS is controlled, mute circuit (pin 55 is input, pin 56 is output) is activated. Mute time is the same as the delay time which is set at that time. (Serial data input mode only, On parallel data input mode, mute circuit is activated by using the mute control port pin 18.)

On long mode, input data number is 9, the way of setting delay time is same.

2-2. CIRCUIT BOARDS LOCATION

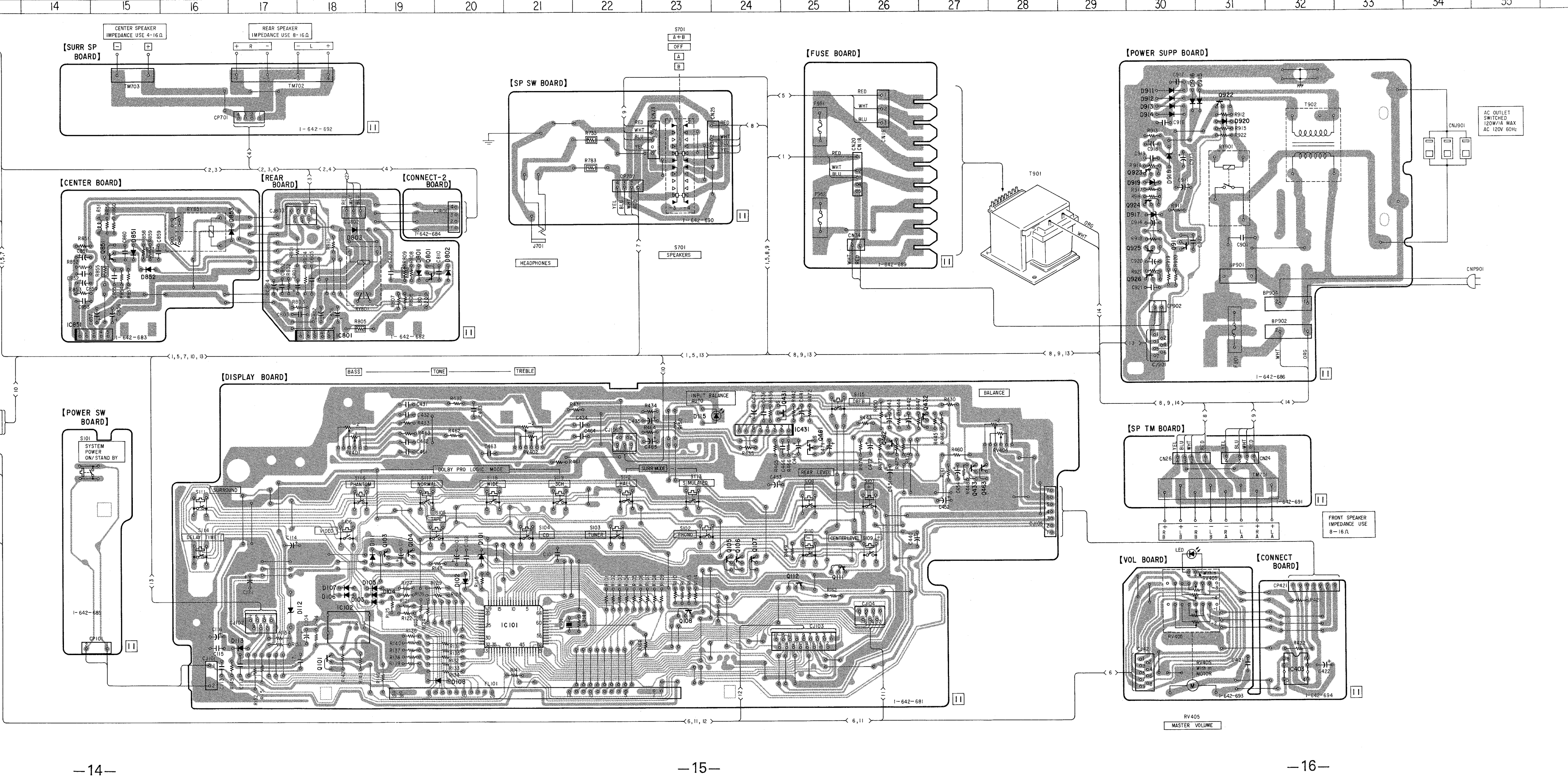
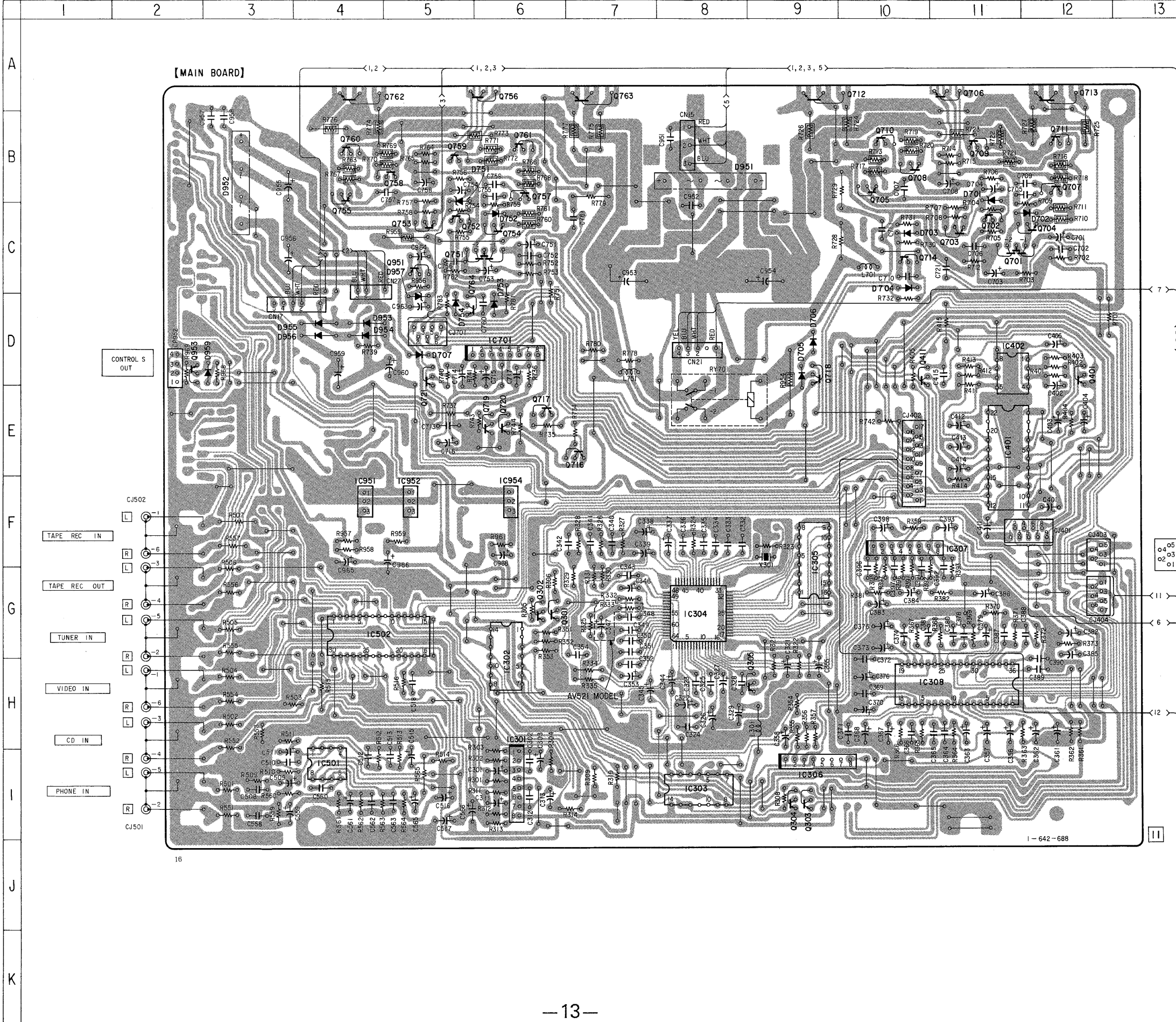


2-3. PRINTED WIRING BOARDS • See page 11 for Circuit Boards Location. • See page 23 for Semiconductor Lead Layouts


Semiconductor		Location	
Ref. No.	Location	Ref. No.	Location
D101	H-20	IC954	F-6
D102	I-20		
D103	I-18	0101	J-18
D104	I-19	0103	H-19
D105	I-18	0104	H-19
D106	I-18	0105	H-24
D107	I-18	0106	H-24
D108	J-20	0107	H-24
D111	H-18	0108	I-23
D112	I-17	0111	I-25
D113	J-17	0112	I-25
D115	F-23	0301	G-6
D116	B-11	0302	G-6
D702	C-12	0303	I-9
D703	C-10	0304	I-9
D704	C-10	0305	H-9
D705	D-9	0401	D-12
D706	D-9	0411	D-10
D707	D-5	0431	F-24
D751	B-6	0432	F-26
D752	C-6	0433	G-27
D753	C-6	0461	G-25
D754	D-5	0462	G-26
D801	D-19	0463	G-27
D802	D-20	0701	C-11
D803	D-18	0702	C-11
D851	D-15	0703	C-11
D852	D-15	0704	C-12
D853	C-16	0705	B-10
D911	B-30	0706	A-11
D912	B-30	0707	B-12
D913	B-30	0708	B-10
D914	B-30	0709	B-11
D915	B-30	0710	B-10
D916	B-30	0711	G-6
D917	C-30	0712	A-10
D918	C-30	0713	A-10
D919	C-30	0714	C-12
D920	B-31	0716	E-7
D951	B-8	0717	E-6
D952	B-3	0718	D-9
D953	D-4	0719	E-6
D954	D-4	0720	E-6
D955	D-4	0721	E-5
D956	D-4	0751	C-5
D957	D-3	0752	C-5
D959	D-3	0753	C-5
		0754	C-6
IC101	I-20	0755	C-4
IC102	I-18	0756	A-6
IC301	H-6	0757	B-6
IC302	G-6	0758	B-5
IC303	G-8	0759	B-5
IC304	G-8	0760	B-4
IC305	G-6	0761	B-5
IC306	I-9	0762	A-5
IC307	F-11	0763	A-7
IC308	H-11	0801	C-5
IC401	E-11	0801	D-19
IC402	D-11	0851	D-15
IC403	G-25	0911	D-30
IC431	J-32	0922	B-31
IC501	C-30	0923	C-30
IC502	G-4	0924	C-30
IC701	D-6	0925	D-30
IC801	E-18	0926	D-30
IC851	E-14	0951	C-5
IC951	F-4	0953	D-2
IC952	F-5		


Note on Mounting Diagram :

- ○ — : Parts extracted from the component side.
- ■ ■ ■ : Pattern on the side which is seen.
- ○ — ○ — : Jumper wire connected to the ground pattern on the component side.



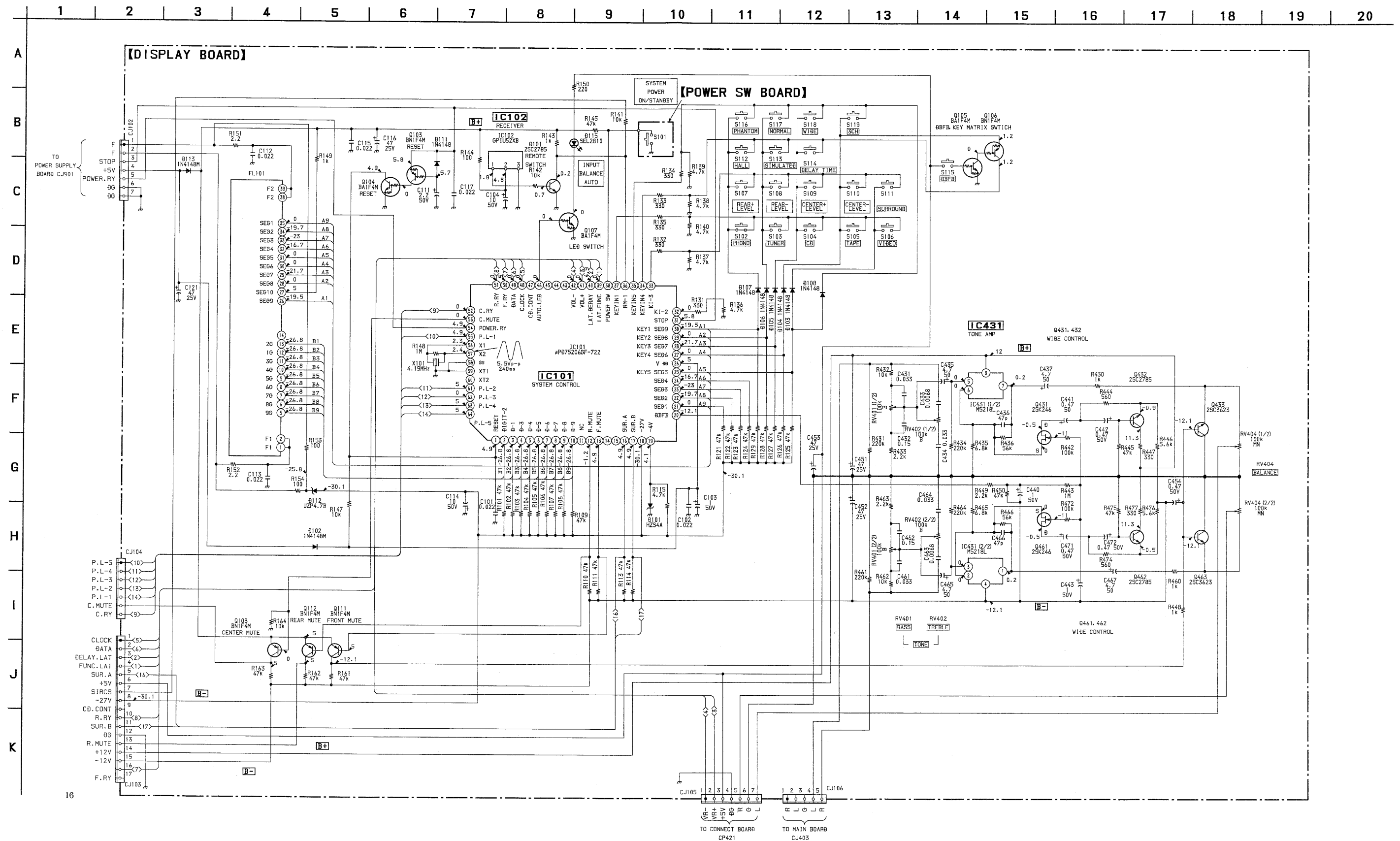


- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
-  : nonflammable resistor.

Note :The components identified by mark  or dotted line with mark are critical for safety.
Replace only with part number specified.

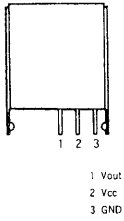
- $B_{+} = B + \text{Line}$
- $B_{-} = B - \text{Line}$
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark : PHONO
- Voltages are taken with a VOM (input impedance 10 MΩ).
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
⇒ : PHONO

2-5. SCHEMATIC DIAGRAM —POWER SECTION— • See page 7 for IC Description. • See page 20 for Note.

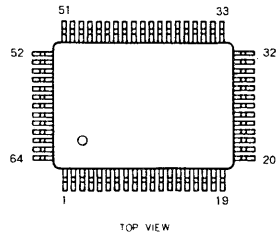


2-6. SEMICONDUCTOR LEAD LAYOUTS

GP1U52XB



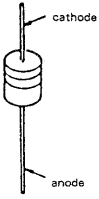
μPD75206GF-722-3BE



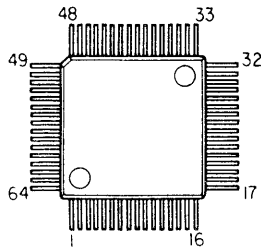
2SA979-FG



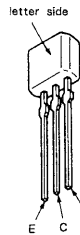
**HZS6C3L
UZL-27H
11ES2**



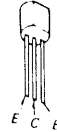
LV1001M



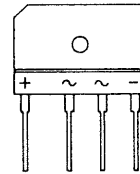
**DTA124ES
2SA1175-HFE
2SC2784-F
2SC2785-HFE
2SC3623A-LK**



2SA988-PAFAEA



RBV-602-01



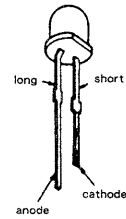
M5F78M05



**2SB1094-LK
2SD2012**



SEL2810A



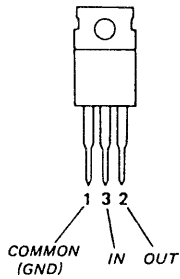
DTC124ES



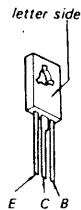
2SD773



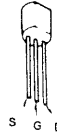
M5F79M12



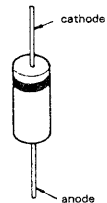
**2SA1142-QPE
2SC2682-QPE**



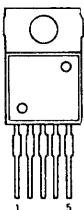
2SK246-Y



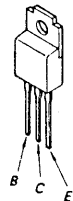
UZP-4.7B



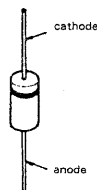
SI18752



**2SA1684-LK
2SC4431-LK**

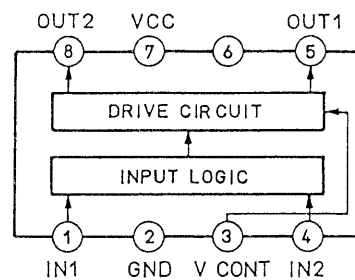


**HZ4ALL
1N4148M
1S1585**

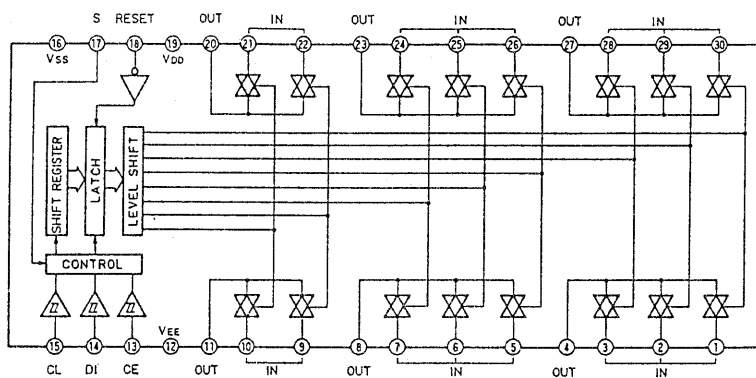


2-7. IC BLOCK DIAGRAMS

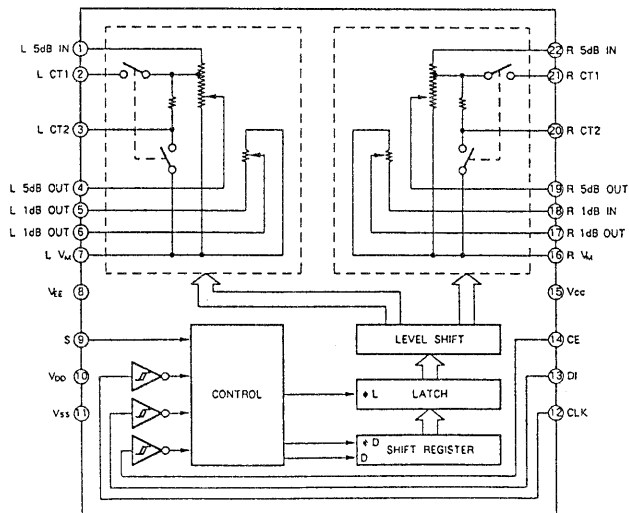
• IC403 LB1639



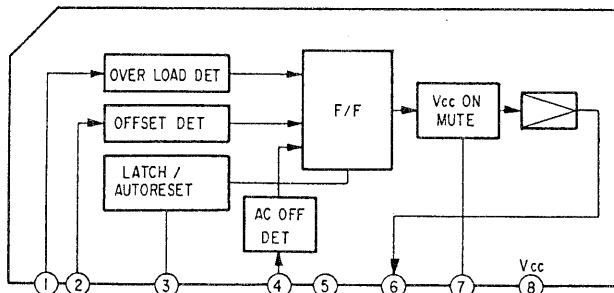
• IC401 LC7535



• IC502 LC7822



• IC701 μ PC1237HA



SECTION 3

EXPLODED VIEWS



NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)...(RED)

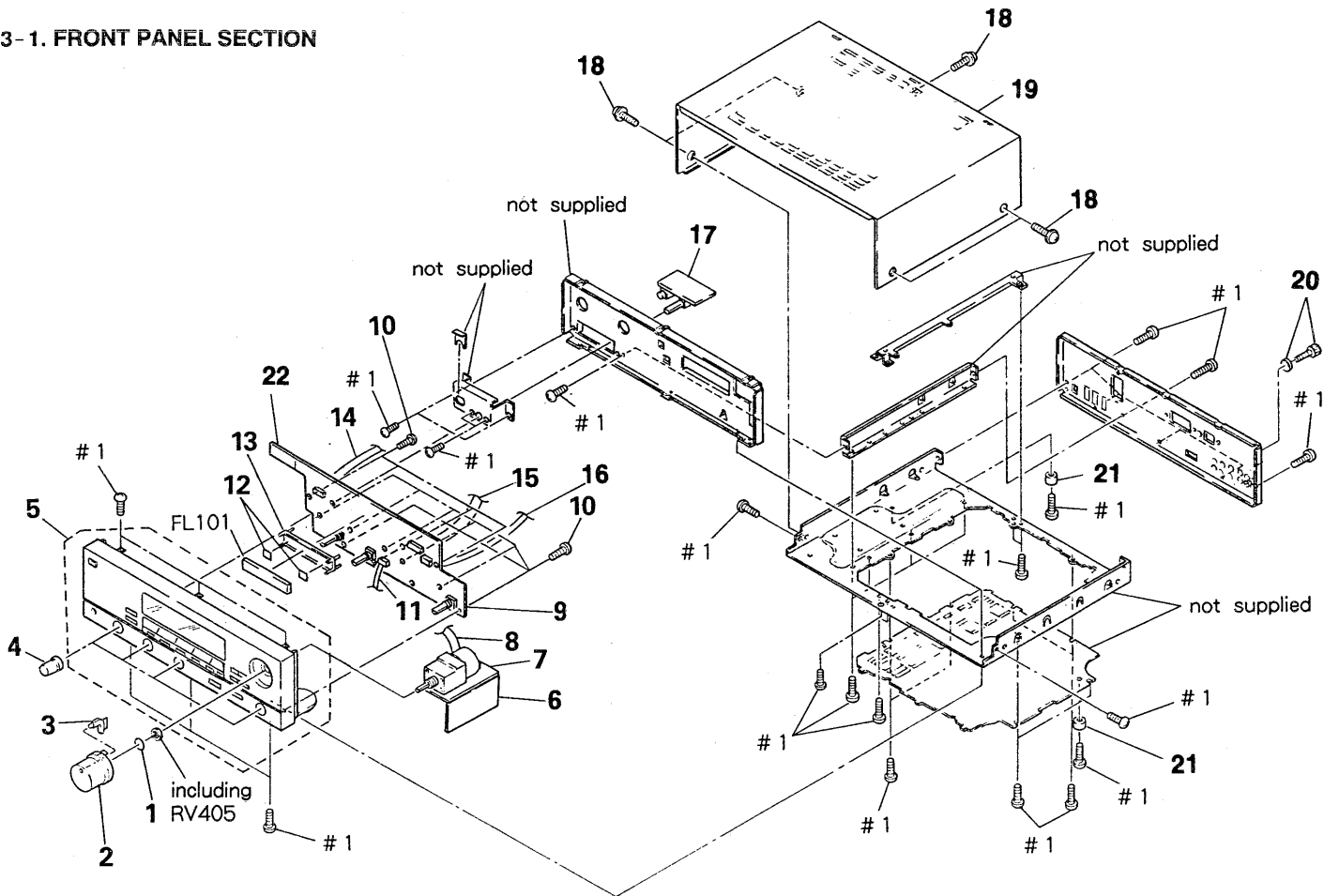
↑
Parts color

↑
Cabinet's color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

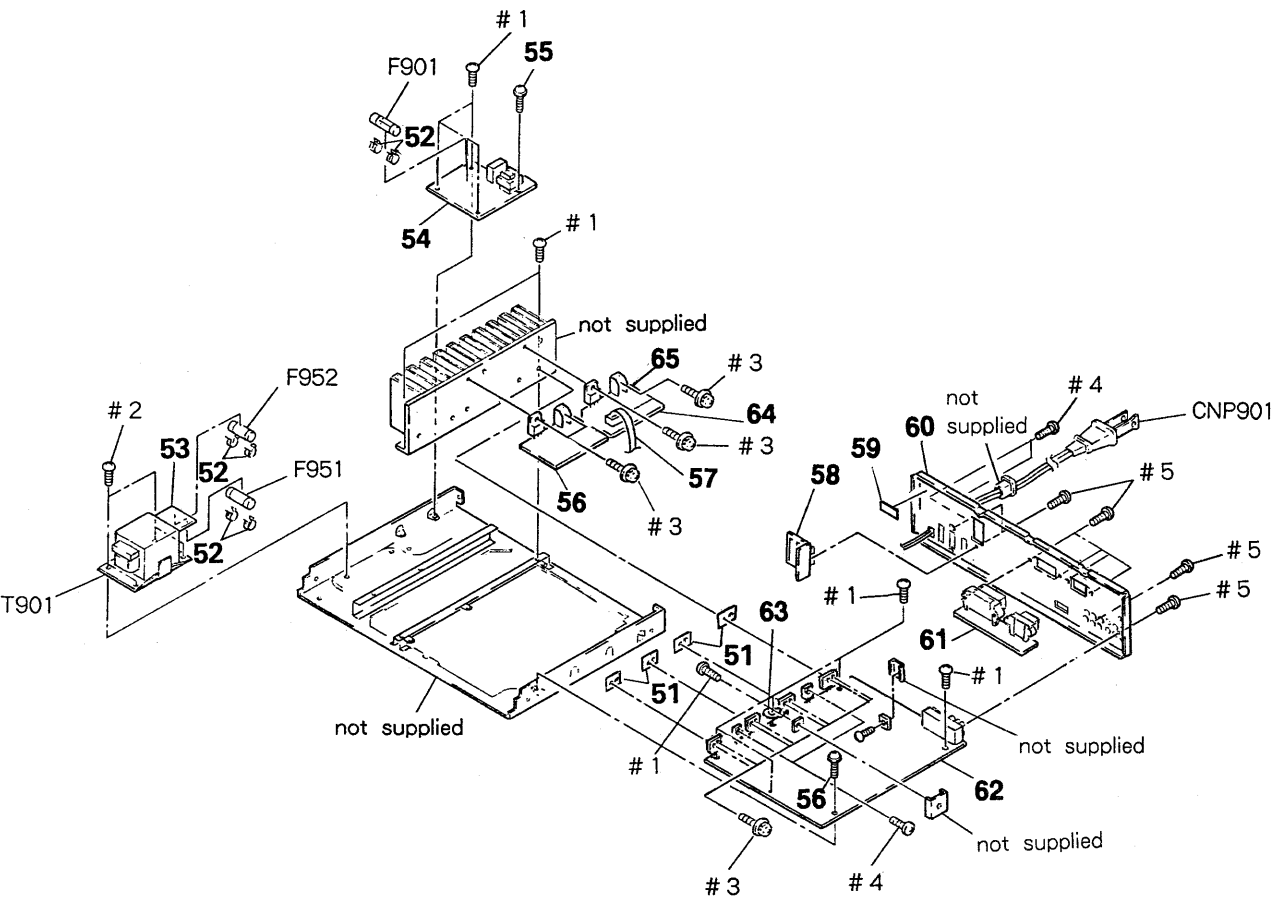
3-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description
1	3-350-426-01	SPRING, RING
2	4-949-659-01	KNOB (VOL-NEW)
3	4-943-092-01	PLATE(VOL), LIGHT GUIDE
4	4-949-640-01	KNOB (DIA. 21)
5	A-4325-425-A	PANEL ASSY, FRONT (AV621)
5	A-4325-430-A	PANEL ASSY, FRONT (AV521)
* 6	1-642-694-11	CONNECT BOARD
* 7	1-642-693-11	VOL BOARD
8	1-690-588-31	WIRE, FLAT TYPE (9 CORE)
* 9	A-4347-039-A	DISPLAY BOARD, COMPLETE (*A including)
10	4-928-635-01	SCREW, +BV (2.6X8) TAPPING
11	1-575-666-11	WIRE, FLAT TYPE (5 CORE)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
* 12	4-921-941-01	CUSHION (FL)	
* 13	4-949-779-01	HOLDER (FL TUBE)	
14	1-690-114-11	WIRE, FLAT TYPE (7 CORE)	
15	1-590-487-11	WIRE, FLAT TYPE (17 CORE)	
* 16	1-590-769-11	WIRE, FLAT TYPE (7 CORE)	
* 17	1-642-690-11	SP SW BOARD	
18	3-704-366-01	SCREW (CASE) (M3X8)	
19	4-931-031-11	CASE	
20	3-706-165-00	SCREW	
21	X-4941-229-1	FOOT ASSY (F2112S-M)	
* 22	1-642-685-11	POWER SW BOARD	
FL101	1-519-727-11	INDICATOR TUBE, FLUORESCENT	

3-2. BACK PANEL SECTION



Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-885-901-31	SHEET, RADIATION		* 60	4-949-769-41	PANEL, BACK (621)	
52	1-533-217-31	HOLDER, FUSE		* 61	1-642-692-11	SURR SP BOARD	
* 53	1-642-689-11	FUSE BOARD		* 62	A-4347-056-A	MAIN BOARD, COMPLETE	
* 54	A-4347-041-A	POWER SUPP BOARD, COMPLETE		* 63	4-942-204-01	PLATE, GROUND	
55	2-383-566-00	SCREW		* 64	1-642-684-11	CONNECT-2 BOARD	
* 56	1-642-683-11	CENTER BOARD		* 65	1-642-682-11	REAR BOARD	
* 57	1-590-769-11	WIRE, FLAT TYPE (7 CORE)		Δ T901	1-450-808-11	TRANSFORMER, POWER	
* 58	1-642-691-11	SP TM BOARD		Δ F901	1-532-749-11	FUSE, GLASS TUBE (8A)	
* 59	3-703-044-26	LABEL, CAUTION		Δ F951	1-576-109-11	FUSE (5A) 125V	
* 60	4-949-769-31	PANEL, BACK (521)		Δ F952	1-576-109-11	FUSE (5A) 125V	
				Δ CNP901	1-551-478-00	CORD, POWER	

SECTION 4

ELECTRICAL PARTS LIST

CENTER

CONNECT

CONNECT-2

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- - XX, - X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS :
uF : μ F
- RESISTORS
All resistors are in ohms.
METAL : metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable
- COILS
uH : μ H
- SEMICONDUCTORS
In each case, u : μ , for example :
uA... : μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	1-642-683-11	CENTER BOARD		R856	1-249-389-11	CARBON 4.7 5% 1/4W	
	*****			R857	1-249-409-11	CARBON 220 5% 1/4W	
	< CAPACITOR >			R858	1-249-428-11	CARBON 8.2K 5% 1/4W	
C851	1-124-927-11	ELECT 4.7uF 20% 100V		Δ R859	1-249-393-11	CARBON 10 5% 1/4W	
C852	1-162-282-31	CERAMIC 100PF 10% 50V		R860	1-249-433-11	CARBON 22K 5% 1/4W	
C853	1-162-282-31	CERAMIC 100PF 10% 50V			< RELAY >		
C854	1-124-477-11	ELECT 47uF 20% 25V		RY851	1-515-790-11	RELAY	
C855	1-162-191-31	CERAMIC 2.2PF 10% 50V			*****		
C856	1-124-907-11	ELECT 10uF 20% 50V		*	1-642-694-11	CONNECT BOARD	
C857	1-124-907-11	ELECT 10uF 20% 50V			*****		
C859	1-164-097-11	CERAMIC 0.022uF 50V			< CAPACITOR >		
C860	1-136-171-00	FILM 0.33uF 5% 50V		C422	1-126-154-11	ELECT 47uF 20% 6.3V	
	< DIODE >				< CONNECTOR >		
D851	8-719-987-63	DIODE 1N4148M		CP421	1-569-132-11	PIN, CONNECTOR 7P	
D852	8-719-987-63	DIODE 1N4148M			< RESISTOR >		
D853	8-719-987-63	DIODE 1N4148M		R421	1-249-409-11	CARBON 220 5% 1/4W	
	< IC >			R422	1-249-393-11	CARBON 10 5% 1/4W	
IC851	8-759-502-33	IC SI18752			*****		
	< COIL >			*	1-642-684-11	CONNECT-2 BOARD	
L851	1-420-872-00	COIL, AIR CORE			*****		
	< TRANSISTOR >				< CONNECTOR >		
Q851	8-729-178-42	TRANSISTOR 2SC2784-F		CJ801	1-562-087-00	SOCKET, CONNECTOR 4P	
	< RESISTOR >				*****		
R851	1-249-417-11	CARBON 1K 5% 1/4W					
R852	1-249-439-11	CARBON 68K 5% 1/4W					
R853	1-249-419-11	CARBON 1.5K 5% 1/4W					
R854	1-249-439-11	CARBON 68K 5% 1/4W					
R855	1-217-151-00	RES, METAL PLATE 0.22					

DISPLAY

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4347-039-A	DISPLAY BOARD, COMPLETE		* CJ105	1-561-651-00	SOCKET, CONNECTOR 7P	
	*****			* CJ106	1-568-824-11	SOCKET, CONNECTOR 5P	
	1-533-217-31	HOLDER, FUSE		* CP901	1-568-826-11	SOCKET, CONNECTOR 7P	
*	4-921-941-01	CUSHION (FL)				< DIODE >	
*	4-949-779-01	HOLDER (FL TUBE)		D101	8-719-985-53	DIODE HZ4ALL	
		< CAPACITOR >		D102	8-719-987-63	DIODE 1N4148M	
C101	1-164-097-11	CERAMIC 0.022uF	50V	D103	8-719-987-63	DIODE 1N4148M	
C102	1-164-097-11	CERAMIC 0.022uF	50V	D104	8-719-987-63	DIODE 1N4148M	
C103	1-124-903-11	ELECT 1uF	20% 50V	D105	8-719-987-63	DIODE 1N4148M	
C104	1-124-907-11	ELECT 10uF	20% 50V	D106	8-719-987-63	DIODE 1N4148M	
C111	1-124-925-11	ELECT 2.2uF	20% 100V	D107	8-719-987-63	DIODE 1N4148M	
C112	1-164-097-11	CERAMIC 0.022uF	50V	D108	8-719-987-63	DIODE 1N4148M	
C113	1-164-097-11	CERAMIC 0.022uF	50V	D111	8-719-987-63	DIODE 1N4148M	
C114	1-124-907-11	ELECT 10uF	20% 50V	D112	8-719-014-48	DIODE UZP-4.7B	
C115	1-164-097-11	CERAMIC 0.022uF	50V	D113	8-719-987-63	DIODE 1N4148M	
C116	1-124-477-11	ELECT 47uF	20% 25V	D115	8-719-301-49	DIODE SEL2810A	
C117	1-164-097-11	CERAMIC 0.022uF	50V			< FILTER >	
C121	1-124-477-11	ELECT 47uF	20% 25V	FL101	1-519-727-11	INDICATOR TUBE, FLUORESCENT	
C431	1-130-489-00	MYLAR 0.033uF	5% 50V			< IC >	
C432	1-136-167-00	FILM 0.15uF	5% 50V	IC101	8-759-062-41	IC uPD75206GF-722-3BE	
C433	1-130-481-00	MYLAR 0.0068uF	5% 50V	IC102	8-749-920-83	IC GP1U52XB	
C434	1-130-489-00	MYLAR 0.033uF	5% 50V	IC431	8-759-634-50	IC M5218AL	
C435	1-124-927-11	ELECT 4.7uF	20% 100V			< TRANSISTOR >	
C436	1-162-215-31	CERAMIC 47PF	5% 50V	Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C437	1-124-927-11	ELECT 4.7uF	20% 100V	Q103	8-729-900-63	TRANSISTOR DTA124ES	
C440	1-124-903-11	ELECT 1uF	20% 50V	Q104	8-729-900-36	TRANSISTOR DTC124ES	
C441	1-124-902-00	ELECT 0.47uF	20% 50V	Q105	8-729-900-36	TRANSISTOR DTC124ES	
C442	1-124-902-00	ELECT 0.47uF	20% 50V	Q106	8-729-900-63	TRANSISTOR DTA124ES	
C443	1-124-903-11	ELECT 1uF	20% 50V	Q107	8-729-900-36	TRANSISTOR DTC124ES	
C451	1-124-477-11	ELECT 47uF	20% 25V	Q108	8-729-900-63	TRANSISTOR DTA124ES	
C452	1-124-477-11	ELECT 47uF	20% 25V	Q111	8-729-900-63	TRANSISTOR DTA124ES	
C453	1-124-477-11	ELECT 47uF	20% 25V	Q112	8-729-900-63	TRANSISTOR DTA124ES	
C454	1-124-902-00	ELECT 0.47uF	20% 50V	Q431	8-729-224-61	TRANSISTOR 2SK246-Y	
C461	1-130-489-00	MYLAR 0.033uF	5% 50V	Q432	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C462	1-136-167-00	FILM 0.15uF	5% 50V	Q433	8-729-141-30	TRANSISTOR 2SC3623A-LK	
C463	1-130-481-00	MYLAR 0.0068uF	5% 50V	Q461	8-729-224-61	TRANSISTOR 2SK246-Y	
C464	1-130-489-00	MYLAR 0.033uF	5% 50V	Q462	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C465	1-124-927-11	ELECT 4.7uF	20% 100V	Q463	8-729-141-30	TRANSISTOR 2SC3623A-LK	
C466	1-162-215-31	CERAMIC 47PF	5% 50V			< RESISTOR >	
C467	1-124-927-11	ELECT 4.7uF	20% 100V	R101	1-249-437-11	CARBON 47K 5% 1/4W	
C471	1-124-902-00	ELECT 0.47uF	20% 50V	R102	1-249-437-11	CARBON 47K 5% 1/4W	
C472	1-124-902-00	ELECT 0.47uF	20% 50V	R103	1-249-437-11	CARBON 47K 5% 1/4W	
		< CONNECTOR >		R104	1-249-437-11	CARBON 47K 5% 1/4W	
* CJ101	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P		R105	1-249-437-11	CARBON 47K 5% 1/4W	
CJ102	1-691-644-11	SOCKET, CONNECTOR 7P					
CJ103	1-691-649-11	SOCKET, CONNECTOR 17P					
CJ104	1-691-644-11	SOCKET, CONNECTOR 7P					

DISPLAY

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R106	1-249-437-11	CARBON 47K 5% 1/4W		R434	1-247-887-00	CARBON 220K 5% 1/4W	
R107	1-249-437-11	CARBON 47K 5% 1/4W		R435	1-249-427-11	CARBON 6.8K 5% 1/4W	
R108	1-249-437-11	CARBON 47K 5% 1/4W		R436	1-249-438-11	CARBON 56K 5% 1/4W	
R109	1-249-437-11	CARBON 47K 5% 1/4W		R442	1-249-441-11	CARBON 100K 5% 1/4W	
R110	1-249-437-11	CARBON 47K 5% 1/4W		R443	1-247-903-00	CARBON 1M 5% 1/4W	
R111	1-249-437-11	CARBON 47K 5% 1/4W		R444	1-249-414-11	CARBON 560 5% 1/4W	
R113	1-249-437-11	CARBON 47K 5% 1/4W		R445	1-249-437-11	CARBON 47K 5% 1/4W	
R114	1-249-437-11	CARBON 47K 5% 1/4W		R446	1-249-426-11	CARBON 5.6K 5% 1/4W	
R115	1-249-425-11	CARBON 4.7K 5% 1/4W		R447	1-249-411-11	CARBON 330 5% 1/4W	
R117	1-249-437-11	CARBON 47K 5% 1/4W		R448	1-249-417-11	CARBON 1K 5% 1/4W	
R121	1-249-437-11	CARBON 47K 5% 1/4W		R448	1-249-421-11	CARBON 2.2K 5% 1/4W	
R122	1-249-437-11	CARBON 47K 5% 1/4W		R449	1-249-421-11	CARBON 2.2K 5% 1/4W	
R123	1-249-437-11	CARBON 47K 5% 1/4W		R450	1-249-437-11	CARBON 47K 5% 1/4W	
R124	1-249-437-11	CARBON 47K 5% 1/4W		R460	1-249-417-11	CARBON 1K 5% 1/4W	
R125	1-249-437-11	CARBON 47K 5% 1/4W		R461	1-247-887-00	CARBON 220K 5% 1/4W	
R126	1-249-437-11	CARBON 47K 5% 1/4W		R462	1-249-429-11	CARBON 10K 5% 1/4W	
R127	1-249-437-11	CARBON 47K 5% 1/4W		R463	1-249-421-11	CARBON 2.2K 5% 1/4W	
R128	1-249-437-11	CARBON 47K 5% 1/4W		R464	1-247-887-00	CARBON 220K 5% 1/4W	
R129	1-249-437-11	CARBON 47K 5% 1/4W		R465	1-249-427-11	CARBON 6.8K 5% 1/4W	
R131	1-249-411-11	CARBON 330 5% 1/4W		R466	1-249-438-11	CARBON 56K 5% 1/4W	
R132	1-249-411-11	CARBON 330 5% 1/4W		R472	1-249-441-11	CARBON 100K 5% 1/4W	
R133	1-249-411-11	CARBON 330 5% 1/4W		R474	1-249-414-11	CARBON 560 5% 1/4W	
R134	1-249-411-11	CARBON 330 5% 1/4W		R475	1-249-437-11	CARBON 47K 5% 1/4W	
R135	1-249-411-11	CARBON 330 5% 1/4W		R476	1-249-426-11	CARBON 5.6K 5% 1/4W	
R136	1-249-425-11	CARBON 4.7K 5% 1/4W		R477	1-249-411-11	CARBON 330 5% 1/4W	
R137	1-249-425-11	CARBON 4.7K 5% 1/4W		< VARIABLE RESISTOR >			
R138	1-249-425-11	CARBON 4.7K 5% 1/4W		RV401	1-241-817-11	RES, VAR, CARBON 100K/100K (BASS)	
R139	1-249-425-11	CARBON 4.7K 5% 1/4W		RV402	1-241-817-11	RES, VAR, CARBON 100K/100K (TREBLE)	
R140	1-249-425-11	CARBON 4.7K 5% 1/4W		RV404	1-238-965-21	RES, VAR, CARBON 100K/100K (BALANCE)	
R141	1-249-429-11	CARBON 10K 5% 1/4W		< SWITCH >			
R142	1-249-429-11	CARBON 10K 5% 1/4W		S102	1-554-303-21	SWITCH, TACTILE (PHONO)	
R143	1-249-417-11	CARBON 1K 5% 1/4W		S103	1-554-303-21	SWITCH, TACTILE (TUNER)	
R144	1-249-405-11	CARBON 100 5% 1/4W		S104	1-554-303-21	SWITCH, TACTILE (CD)	
R145	1-249-437-11	CARBON 47K 5% 1/4W		S105	1-554-303-21	SWITCH, TACTILE (TAPE)	
R147	1-249-429-11	CARBON 10K 5% 1/4W		S106	1-554-303-21	SWITCH, TACTILE (VIDEO)	
R148	1-247-903-00	CARBON 1M 5% 1/4W		S107	1-554-303-21	SWITCH, TACTILE (REAR +LEVEL)	
R149	1-249-417-11	CARBON 1K 5% 1/4W		S108	1-554-303-21	SWITCH, TACTILE (REAR -LEVEL)	
R150	1-249-409-11	CARBON 220 5% 1/4W		S109	1-554-303-21	SWITCH, TACTILE (CENTER +LEVEL)	
R151	1-249-385-11	CARBON 2.2 5% 1/6W		S110	1-554-303-21	SWITCH, TACTILE (CENTER -LEVEL)	
R152	1-249-385-11	CARBON 2.2 5% 1/6W		S111	1-554-303-21	SWITCH, TACTILE (SURROUND)	
R153	1-249-405-11	CARBON 100 5% 1/4W		S112	1-554-303-21	SWITCH, TACTILE (HALL)	
R154	1-249-405-11	CARBON 100 5% 1/4W		S113	1-554-303-21	SWITCH, TACTILE (SIMULATED)	
R161	1-249-437-11	CARBON 47K 5% 1/4W		S114	1-554-303-21	SWITCH, TACTILE (DELAY TIME)	
R162	1-249-437-11	CARBON 47K 5% 1/4W		S115	1-554-303-21	SWITCH, TACTILE (DBFB)	
R163	1-249-437-11	CARBON 47K 5% 1/4W		S116	1-554-303-21	SWITCH, TACTILE (PHANTOM)	
R164	1-249-429-11	CARBON 10K 5% 1/4W		S117	1-554-303-21	SWITCH, TACTILE (NORMAL)	
R430	1-249-417-11	CARBON 1K 5% 1/4W		S118	1-554-303-21	SWITCH, TACTILE (WIDE)	
R431	1-247-887-00	CARBON 220K 5% 1/4W		S119	1-554-303-21	SWITCH, TACTILE (3HC)	
R432	1-249-429-11	CARBON 10K 5% 1/4W		S120	1-554-303-21	SWITCH, TACTILE (DOLBY)	
R433	1-249-421-11	CARBON 2.2K 5% 1/4W					

DISPLAY	FUSE	MAIN
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Ref. No.	Part No.	Description	Remarks
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< VIBRATOR >

X101	1-577-101-11	VIBRATOR, CERAMIC 4.19MHz	
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*	1-642-689-11	FUSE BOARD	

< FUSE >

△F951	1-576-109-11	FUSE (5A) 125V	
△F952	1-576-109-11	FUSE (5A) 125V	

*	A-4347-056-A	MAIN BOARD, COMPLETE	

	1-533-217-31	HOLDER, FUSE	
*	4-942-204-01	PLATE, GROUND	
	7-682-548-04	SCREW +BVT 3X8 (S)	

< CAPACITOR >

C301	1-124-907-11	ELECT	10uF	20%	50V
C302	1-162-215-31	CERAMIC	47PF	5%	50V
C303	1-124-907-11	ELECT	10uF	20%	50V
C311	1-124-907-11	ELECT	10uF	20%	50V
C312	1-162-215-31	CERAMIC	47PF	5%	50V
C313	1-124-907-11	ELECT	10uF	20%	50V
C321	1-126-925-11	ELECT	470uF	20%	10V
C322	1-124-927-11	ELECT	4.7uF	20%	100V
C323	1-162-294-31	CERAMIC	0.001uF	10%	50V
C324	1-130-487-00	MYLAR	0.022uF	5%	50V
C325	1-162-284-31	CERAMIC	150PF	10%	50V
C326	1-126-923-11	ELECT	220uF	20%	10V
C327	1-126-923-11	ELECT	220uF	20%	10V
C328	1-164-159-11	CERAMIC	0.1uF		50V
C329	1-126-933-11	ELECT	100uF	20%	16V
C332	1-136-169-00	FILM	0.22uF	5%	50V
C333	1-130-493-00	MYLAR	0.068uF	5%	50V
C334	1-102-124-00	CERAMIC	0.0039uF	10%	50V
C335	1-102-125-00	CERAMIC	4700PF	10%	50V
C336	1-130-489-00	MYLAR	0.033uF	5%	50V
C337	1-124-927-11	ELECT	4.7uF	20%	100V
C338	1-124-903-11	ELECT	1uF	20%	50V
C339	1-124-903-11	ELECT	1uF	20%	50V
C340	1-130-489-00	MYLAR	0.033uF	5%	50V
C341	1-102-126-00	CERAMIC	0.0056uF	10%	50V

Ref. No.	Part No.	Description	Remarks
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C342	1-102-127-00	CERAMIC	6800PF	10%	50V
C343	1-162-291-31	CERAMIC	560PF	10%	50V
C344	1-124-907-11	ELECT	10uF	20%	50V
C345	1-124-907-11	ELECT	10uF	20%	50V
C346	1-124-907-11	ELECT	10uF	20%	50V
C347	1-124-907-11	ELECT	10uF	20%	50V (AV521)
C348	1-162-292-31	CERAMIC	680PF	10%	50V
C349	1-136-167-00	FILM	0.15uF	5%	50V
C350	1-162-284-31	CERAMIC	150PF	10%	50V
C351	1-130-487-00	MYLAR	0.022uF	5%	50V
C352	1-162-294-31	CERAMIC	0.001uF	10%	50V
C353	1-124-927-11	ELECT	4.7uF	20%	100V
C354	1-136-169-00	FILM	0.22uF	5%	50V
C355	1-124-477-11	ELECT	47uF	20%	25V
C358	1-124-907-11	ELECT	10uF	20%	50V
C361	1-126-923-11	ELECT	220uF	20%	10V
C362	1-124-477-11	ELECT	47uF	20%	25V
C363	1-124-252-00	ELECT	0.33uF	20%	50V
C364	1-162-292-31	CERAMIC	680PF	10%	50V
C365	1-136-165-00	FILM	0.1uF	5%	50V
C366	1-136-165-00	FILM	0.1uF	5%	50V
C367	1-124-925-11	ELECT	2.2uF	20%	100V
C368	1-124-925-11	ELECT	2.2uF	20%	100V
C369	1-136-167-00	FILM	0.15uF	5%	50V
C370	1-123-382-00	ELECT	3.3uF	20%	100V
C371	1-136-167-00	FILM	0.15uF	5%	50V
C372	1-136-167-00	FILM	0.15uF	5%	50V
C373	1-123-382-00	ELECT	3.3uF	20%	100V
C374	1-136-167-00	FILM	0.15uF	5%	50V
C375	1-124-925-11	ELECT	2.2uF	20%	100V
C376	1-124-925-11	ELECT	2.2uF	20%	100V
C378	1-162-292-31	CERAMIC	680PF	10%	50V
C379	1-124-252-00	ELECT	0.33uF	20%	50V
C380	1-136-165-00	FILM	0.1uF	5%	50V
C381	1-136-165-00	FILM	0.1uF	5%	50V
C382	1-124-902-00	ELECT	0.47uF	20%	50V
C383	1-124-907-11	ELECT	10uF	20%	50V
C385	1-124-907-11	ELECT	10uF	20%	50V
C387	1-130-485-00	MYLAR	0.015uF	5%	50V
C388	1-130-483-00	MYLAR	0.01uF	5%	50V
C389	1-162-292-31	CERAMIC	680PF	10%	50V
C390	1-136-165-00	FILM	0.1uF	5%	50V
C384	1-124-907-11	ELECT	10uF	20%	50V
C386	1-124-907-11	ELECT	10uF	20%	50V
C391	1-162-215-31	CERAMIC	47PF	5%	50V
C392	1-162-215-31	CERAMIC	47PF	5%	50V
C393	1-124-907-11	ELECT	10uF	20%	50V
C396	1-162-215-31	CERAMIC	47PF	5%	50V
C397	1-162-215-31	CERAMIC	47PF	5%	50V
C398	1-124-907-11	ELECT	10uF	20%	50V

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C401	1-124-927-11	ELECT	4.7uF 20% 100V	C753	1-124-477-11	ELECT	47uF 20% 25V
C402	1-124-927-11	ELECT	4.7uF 20% 100V	C754	1-124-477-11	ELECT	47uF 20% 25V
C403	1-124-927-11	ELECT	4.7uF 20% 100V	C755	1-162-292-31	CERAMIC	680PF 10% 50V
C404	1-124-927-11	ELECT	4.7uF 20% 100V	C756	1-162-205-31	CERAMIC	18PF 5% 50V
C405	1-124-903-11	ELECT	1uF 20% 50V	C757	1-161-959-00	CERAMIC	22PF 10% 500V
C411	1-124-927-11	ELECT	4.7uF 20% 100V	C758	1-124-477-11	ELECT	47uF 20% 25V
C412	1-124-927-11	ELECT	4.7uF 20% 100V	C759	1-161-959-00	CERAMIC	22PF 10% 500V
C413	1-124-927-11	ELECT	4.7uF 20% 100V	C760	1-136-165-00	FILM	0.1uF 5% 50V
C414	1-124-927-11	ELECT	4.7uF 20% 100V	C761	1-130-487-00	MYLAR	0.022uF 5% 50V
C415	1-136-167-00	FILM	0.15uF 5% 50V	C951	1-106-367-00	MYLAR	0.01uF 5% 200V
C508	1-162-282-31	CERAMIC	100PF 10% 50V	C952	1-106-367-00	MYLAR	0.01uF 5% 200V
C509	1-124-927-11	ELECT	4.7uF 20% 100V	C953	1-125-730-21	ELECT	10000uF 20% 71V
C510	1-162-282-31	CERAMIC	100PF 10% 50V	C954	1-125-730-21	ELECT	10000uF 20% 71V
C511	1-124-477-11	ELECT	47uF 20% 25V	C955	1-124-636-00	ELECT	3300uF 20% 25V
C512	1-102-126-00	CERAMIC	0.0056uF 10% 50V	C956	1-124-636-00	ELECT	3300uF 20% 25V
C513	1-102-119-00	CERAMIC	1500PF 10% 50V	C959	1-124-557-11	ELECT	1000uF 20% 25V
C515	1-124-903-11	ELECT	1uF 20% 50V	C957	1-164-097-11	CERAMIC	0.022uF 50V
C516	1-124-477-11	ELECT	47uF 20% 25V	C958	1-164-097-11	CERAMIC	0.022uF 50V
C517	1-124-907-11	ELECT	10uF 20% 50V	C960	1-124-480-11	ELECT	470uF 20% 25V
C518	1-162-294-31	CERAMIC	0.001uF 10% 50V	C963	1-124-907-11	ELECT	10uF 20% 50V
C356	1-124-907-11	ELECT	10uF 20% 50V	C964	1-124-907-11	ELECT	10uF 20% 50V
C357	1-124-907-11	ELECT	10uF 20% 50V	C965	1-124-477-11	ELECT	47uF 20% 25V
C558	1-162-282-31	CERAMIC	100PF 10% 50V	C966	1-126-925-11	ELECT	470uF 20% 10V
C559	1-124-927-11	ELECT	4.7uF 20% 100V	C968	1-124-477-11	ELECT	47uF 20% 25V
C560	1-162-282-31	CERAMIC	100PF 10% 50V	< CONNECTOR >			
C561	1-124-477-11	ELECT	47uF 20% 25V	* CJ401	1-568-828-11	SOCKET, CONNECTOR 9P	
C562	1-102-126-00	CERAMIC	0.0056uF 10% 50V	* CJ402	1-568-836-11	SOCKET, CONNECTOR 17P	
C563	1-102-119-00	CERAMIC	1500PF 10% 50V	* CJ403	1-568-824-11	SOCKET, CONNECTOR 5P	
C565	1-124-903-11	ELECT	1uF 20% 50V	* CJ404	1-568-826-11	SOCKET, CONNECTOR 7P	
C566	1-124-477-11	ELECT	47uF 20% 25V	CJ501	1-580-826-11	JACK, PIN 6P	
C701	1-124-927-11	ELECT	4.7uF 20% 100V	CJ502	1-580-825-11	JACK, PIN 6P	
C702	1-162-286-31	CERAMIC	220PF 10% 50V	* CJ701	1-568-826-11	SOCKET, CONNECTOR 7P	
C703	1-124-477-11	ELECT	47uF 20% 25V	CP952	1-566-211-11	PIN, CONNECTOR 4P	
C704	1-124-477-11	ELECT	47uF 20% 25V	< DIODE >			
C705	1-162-292-31	CERAMIC	680PF 10% 50V	D701	8-719-933-41	DIODE	HZS6C3L
C706	1-162-205-31	CERAMIC	18PF 5% 50V	D702	8-719-815-85	DIODE	1S1585
C707	1-161-959-00	CERAMIC	22PF 10% 500V	D703	8-719-815-85	DIODE	1S1585
C708	1-124-477-11	ELECT	47uF 20% 25V	D704	8-719-815-85	DIODE	1S1585
C709	1-161-959-00	CERAMIC	22PF 10% 500V	D705	8-719-987-63	DIODE	1N4148M
C710	1-136-165-00	FILM	0.1uF 5% 50V	D706	8-719-987-63	DIODE	1N4148M
C711	1-130-487-00	MYLAR	0.022uF 5% 50V	D707	8-719-987-63	DIODE	1N4148M
C713	1-164-097-11	CERAMIC	0.022uF 50V	D751	8-719-933-41	DIODE	HZS6C3L
C714	1-124-477-11	ELECT	47uF 20% 25V	D752	8-719-815-85	DIODE	1S1585
C715	1-126-933-11	ELECT	100uF 20% 16V	D753	8-719-815-85	DIODE	1S1585
C716	1-124-907-11	ELECT	10uF 20% 50V	D754	8-719-815-85	DIODE	1S1585
C717	1-124-477-11	ELECT	47uF 20% 25V	D951	8-719-302-38	DIODE	RBV-602-01
C721	1-102-125-00	CERAMIC	4700PF 10% 50V	D952	8-719-312-09	DIODE	RBA-402
C722	1-164-097-11	CERAMIC	0.022uF 50V	D953	8-719-200-82	DIODE	11ES2
C751	1-124-927-11	ELECT	4.7uF 20% 100V	D954	8-719-200-82	DIODE	11ES2
C752	1-162-286-31	CERAMIC	220PF 10% 50V				

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
D955	8-719-200-82	DIODE 11ES2		Q714	8-729-178-42	TRANSISTOR 2SC2784-F	
D956	8-719-200-82	DIODE 11ES2		Q716	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D957	8-719-002-48	DIODE UZL-27H		Q717	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D959	8-719-987-63	DIODE 1N4148M		Q718	8-729-178-42	TRANSISTOR 2SC2784-F	
< IC >				Q719	8-729-900-63	TRANSISTOR DTA124ES	
IC301	8-759-634-50	IC M5218AL		Q720	8-729-900-36	TRANSISTOR DTC124ES	
IC302	8-759-801-01	IC LC4966		Q721	8-729-900-63	TRANSISTOR DTA124ES	
IC303	8-759-801-01	IC LC4966		Q751	8-729-900-63	TRANSISTOR DTA124ES	
IC304	8-759-823-63	IC LV1001M		Q751	8-729-620-18	TRANSISTOR 2SA979-FG	
IC305	8-759-821-13	IC LM3364K-15		Q752	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
IC306	8-759-634-50	IC M5218AL		Q753	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC307	8-759-634-50	IC M5218AL		Q754	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC308	8-759-047-15	IC LA2780		Q755	8-729-141-06	TRANSISTOR 2SA1142-QPE	
IC401	8-759-820-11	IC LC7535		Q756	8-729-209-15	TRANSISTOR 2SD2012	
IC402	8-759-634-51	IC M5218AP		Q757	8-729-141-05	TRANSISTOR 2SC2682-QPE	
IC403	8-759-820-62	IC LB1639		Q758	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC501	8-759-634-51	IC M5218AP		Q759	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC502	8-759-805-14	IC LC7822		Q760	8-729-141-46	TRANSISTOR 2SC4431-LK	
IC701	8-759-111-68	IC μ PC1237HA		Q761	8-729-141-37	TRANSISTOR 2SA1684-LK	
IC951	8-759-604-39	IC AN6291		Q762	8-729-320-96	TRANSISTOR 2SC2921	
IC952	8-759-604-35	IC M5F78M05		Q763	8-729-320-73	TRANSISTOR 2SA1215	
IC954	8-759-604-45	IC M5F79M12		Q764	8-729-178-42	TRANSISTOR 2SC2784-F	
< COIL >				Q951	8-729-141-83	TRANSISTOR 2SB1094-LK	
L301	1-410-521-11	INDUCTOR 100uH		Q953	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L701	1-420-872-00	COIL, AIR CORE		< RESISTOR >			
L751	1-420-872-00	COIL, AIR CORE		R301	1-247-887-00	CARBON 220K 5% 1/4W	
< TRANSISTOR >				R302	1-247-887-00	CARBON 220K 5% 1/4W	
Q301	8-729-141-30	TRANSISTOR 2SC3623A-LK		R303	1-247-887-00	CARBON 220K 5% 1/4W	
Q302	8-729-900-36	TRANSISTOR DTC124ES		R304	1-247-887-00	CARBON 220K 5% 1/4W	
Q303	8-729-900-36	TRANSISTOR DTC124ES		R305	1-249-423-11	CARBON 3.3K 5% 1/4W	
Q304	8-729-900-63	TRANSISTOR DTA124ES		R306	1-249-433-11	CARBON 22K 5% 1/4W	
Q305	8-729-140-98	TRANSISTOR 2SD773		R308	1-249-441-11	CARBON 100K 5% 1/4W	
Q401	8-729-141-30	TRANSISTOR 2SC3623A-LK		R309	1-249-417-11	CARBON 1K 5% 1/4W	
Q411	8-729-141-30	TRANSISTOR 2SC3623A-LK		R311	1-247-887-00	CARBON 220K 5% 1/4W	
Q701	8-729-620-18	TRANSISTOR 2SA979-FG		R312	1-247-887-00	CARBON 220K 5% 1/4W	
Q702	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R313	1-247-887-00	CARBON 220K 5% 1/4W	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE		R314	1-247-887-00	CARBON 220K 5% 1/4W	
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE		R319	1-249-417-11	CARBON 1K 5% 1/4W	
Q705	8-729-141-06	TRANSISTOR 2SA1142-QPE		R321	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q706	8-729-209-15	TRANSISTOR 2SD2012		R322	1-249-430-11	CARBON 12K 5% 1/4W	
Q707	8-729-141-05	TRANSISTOR 2SC2682-QPE		R323	1-247-903-00	CARBON 1M 5% 1/4W	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		R324	1-249-437-11	CARBON 47K 5% 1/4W	
Q709	8-729-119-76	TRANSISTOR 2SA1175-HFE		R325	1-249-423-11	CARBON 3.3K 5% 1/4W	
Q710	8-729-141-46	TRANSISTOR 2SC4431-LK		R326	1-249-429-11	CARBON 10K 5% 1/4W	
Q711	8-729-141-37	TRANSISTOR 2SA1684-LK		R327	1-249-413-11	CARBON 470 5% 1/4W	
Q712	8-729-320-96	TRANSISTOR 2SC2921		R328	1-249-428-11	CARBON 8.2K 5% 1/4W	
Q713	8-729-320-73	TRANSISTOR 2SA1215		R329	1-249-428-11	CARBON 8.2K 5% 1/4W	
				R330	1-249-431-11	CARBON 15K 5% 1/4W	
				R331	1-249-428-11	CARBON 8.2K 5% 1/4W	
				R332	1-249-436-11	CARBON 39K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R333	1-249-429-11	CARBON	10K 5% 1/4W (AV521)	R510	1-249-441-11	CARBON	100K 5% 1/4W
R334	1-247-887-00	CARBON	220K 5% 1/4W	R511	1-249-417-11	CARBON	1K 5% 1/4W
R335	1-247-887-00	CARBON	220K 5% 1/4W	R512	1-247-897-11	CARBON	560K 5% 1/4W
R351	1-249-427-11	CARBON	6.8K 5% 1/4W	R513	1-249-437-11	CARBON	47K 5% 1/4W
R352	1-249-427-11	CARBON	6.8K 5% 1/4W	R514	1-249-441-11	CARBON	100K 5% 1/4W
R353	1-247-887-00	CARBON	220K 5% 1/4W	R515	1-249-409-11	CARBON	220 5% 1/4W
R354	1-249-429-11	CARBON	10K 5% 1/4W	R516	1-249-425-11	CARBON	4.7K 5% 1/4W
R355	1-249-429-11	CARBON	10K 5% 1/4W	R551	1-249-411-11	CARBON	330 5% 1/4W
R356	1-249-429-11	CARBON	10K 5% 1/4W	R552	1-249-427-11	CARBON	6.8K 5% 1/4W
R357	1-249-429-11	CARBON	10K 5% 1/4W	R553	1-249-433-11	CARBON	22K 5% 1/4W
R358	1-249-429-11	CARBON	10K 5% 1/4W	R554	1-249-417-11	CARBON	1K 5% 1/4W
R361	1-249-429-11	CARBON	10K 5% 1/4W	R555	1-249-417-11	CARBON	1K 5% 1/4W
R362	1-249-422-11	CARBON	2.7K 5% 1/4W	R556	1-249-417-11	CARBON	1K 5% 1/4W
R363	1-249-431-11	CARBON	15K 5% 1/4W	R557	1-249-417-11	CARBON	1K 5% 1/4W
R364	1-249-421-11	CARBON	2.2K 5% 1/4W	R559	1-249-441-11	CARBON	100K 5% 1/4W
R365	1-249-437-11	CARBON	47K 5% 1/4W	R560	1-249-441-11	CARBON	100K 5% 1/4W
R366	1-247-852-11	CARBON	7.5K 5% 1/4W	R561	1-249-417-11	CARBON	1K 5% 1/4W
R367	1-247-852-11	CARBON	7.5K 5% 1/4W	R562	1-247-897-11	CARBON	560K 5% 1/4W
R368	1-249-437-11	CARBON	47K 5% 1/4W	R563	1-249-437-11	CARBON	47K 5% 1/4W
R369	1-249-421-11	CARBON	2.2K 5% 1/4W	R564	1-249-441-11	CARBON	100K 5% 1/4W
R370	1-249-431-11	CARBON	15K 5% 1/4W	R565	1-249-409-11	CARBON	220 5% 1/4W
R371	1-249-433-11	CARBON	22K 5% 1/4W	R701	1-249-417-11	CARBON	1K 5% 1/4W
R372	1-249-433-11	CARBON	22K 5% 1/4W	R702	1-249-435-11	CARBON	33K 5% 1/4W
R373	1-249-429-11	CARBON	10K 5% 1/4W	R703	1-249-409-11	CARBON	220 5% 1/4W
R381	1-249-429-11	CARBON	10K 5% 1/4W	R704	1-249-421-11	CARBON	2.2K 5% 1/4W
R382	1-249-429-11	CARBON	10K 5% 1/4W	R705	1-249-434-11	CARBON	27K 5% 1/4W
R391	1-247-895-00	CARBON	470K 5% 1/4W	R706	1-249-426-11	CARBON	5.6K 5% 1/4W
R392	1-249-429-11	CARBON	10K 5% 1/4W	R707	1-249-425-11	CARBON	4.7K 5% 1/4W
R393	1-249-429-11	CARBON	10K 5% 1/4W	R708	1-249-435-11	CARBON	33K 5% 1/4W
R396	1-247-895-00	CARBON	470K 5% 1/4W	R709	1-249-411-11	CARBON	330 5% 1/4W
R397	1-249-429-11	CARBON	10K 5% 1/4W	△R710	1-249-409-11	CARBON	220 5% 1/4W
R398	1-249-429-11	CARBON	10K 5% 1/4W	△R711	1-249-409-11	CARBON	220 5% 1/4W
R401	1-247-887-00	CARBON	220K 5% 1/4W	R712	1-249-435-11	CARBON	33K 5% 1/4W
R402	1-249-429-11	CARBON	10K 5% 1/4W	△R713	1-249-397-11	CARBON	22 5% 1/4W
R403	1-247-883-00	CARBON	150K 5% 1/4W	R714	1-247-830-11	CARBON	910 5% 1/4W
R404	1-247-887-00	CARBON	220K 5% 1/4W	R715	1-249-412-11	CARBON	390 5% 1/4W
R405	1-249-425-11	CARBON	4.7K 5% 1/4W	△R716	1-249-397-11	CARBON	22 5% 1/4W
R411	1-247-887-00	CARBON	220K 5% 1/4W	△R717	1-249-393-11	CARBON	10 5% 1/4W
R412	1-249-429-11	CARBON	10K 5% 1/4W	△R718	1-249-393-11	CARBON	10 5% 1/4W
R413	1-247-883-00	CARBON	150K 5% 1/4W	△R719	1-249-423-11	CARBON	3.3K 5% 1/4W
R414	1-247-887-00	CARBON	220K 5% 1/4W	△R720	1-249-417-11	CARBON	1K 5% 1/4W
R415	1-249-417-11	CARBON	1K 5% 1/4W	△R721	1-249-417-11	CARBON	1K 5% 1/4W
R501	1-249-411-11	CARBON	330 5% 1/4W	△R722	1-249-421-11	CARBON	2.2K 5% 1/4W
R502	1-249-427-11	CARBON	6.8K 5% 1/4W	△R723	1-247-706-11	CARBON	330 5% 1/4W
R503	1-249-433-11	CARBON	22K 5% 1/4W	△R724	1-247-688-11	CARBON	10 5% 1/4W
R504	1-249-417-11	CARBON	1K 5% 1/4W	△R725	1-247-688-11	CARBON	10 5% 1/4W
R505	1-249-417-11	CARBON	1K 5% 1/4W	△R726	1-214-789-00	RES, METAL PLATE	0.1
R506	1-249-417-11	CARBON	1K 5% 1/4W	△R727	1-214-789-00	RES, METAL PLATE	0.1
R507	1-249-417-11	CARBON	1K 5% 1/4W	R728	1-260-072-11	CARBON	4.7 5% 1/2W
R509	1-249-441-11	CARBON	100K 5% 1/4W	R729	1-260-076-11	CARBON	10 5% 1/2W

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MAIN	POWER SUPP
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Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R730	1-249-407-11	CARBON 150 5% 1/4W		R959	1-249-385-11	CARBON 2.2 5% 1/6W	
R731	1-249-431-11	CARBON 15K 5% 1/4W		R961	1-249-385-11	CARBON 2.2 5% 1/6W	
R732	1-249-437-11	CARBON 47K 5% 1/4W		R968	1-249-417-11	CARBON 1K 5% 1/4W	
R734	1-249-425-11	CARBON 4.7K 5% 1/4W		R969	1-249-393-11	CARBON 10 5% 1/4W	
R735	1-249-425-11	CARBON 4.7K 5% 1/4W				< RELAY >	
R736	1-249-438-11	CARBON 56K 5% 1/4W		RY701	1-515-356-00	RELAY	
R737	1-249-428-11	CARBON 8.2K 5% 1/4W				< VIBRATOR >	
R739	1-249-429-11	CARBON 10K 5% 1/4W					
R740	1-249-427-11	CARBON 6.8K 5% 1/4W		X301	1-577-157-11	VIBRATOR, CERAMIC 8MHz	
R741	1-249-441-11	CARBON 100K 5% 1/4W					

R742	1-249-425-11	CARBON 4.7K 5% 1/4W		*	A-4347-041-A	POWER SUPP BOARD, COMPLETE	
R743	1-249-437-11	CARBON 47K 5% 1/4W				*****	
R744	1-249-423-11	CARBON 3.3K 5% 1/4W				< BASE POST >	
R751	1-249-417-11	CARBON 1K 5% 1/4W					
R752	1-249-435-11	CARBON 33K 5% 1/4W		BP901	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
				BP902	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
R753	1-249-409-11	CARBON 220 5% 1/4W		BP904	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
R754	1-249-421-11	CARBON 2.2K 5% 1/4W					
R755	1-249-434-11	CARBON 27K 5% 1/4W				< CAPACITOR >	
R756	1-249-426-11	CARBON 5.6K 5% 1/4W					
R757	1-249-425-11	CARBON 4.7K 5% 1/4W		C901	1-161-744-00	CERAMIC 0.01uF 400V	
				C911	1-124-557-11	ELECT 1000uF 20% 25V	
R758	1-249-435-11	CARBON 33K 5% 1/4W		C913	1-124-477-11	ELECT 47uF 20% 25V	
R759	1-249-411-11	CARBON 330 5% 1/4W		C914	1-124-477-11	ELECT 47uF 20% 25V	
△R760	1-249-409-11	CARBON 220 5% 1/4W		C916	1-164-097-11	CERAMIC 0.022uF 50V	
△R761	1-249-409-11	CARBON 220 5% 1/4W					
R762	1-249-435-11	CARBON 33K 5% 1/4W		C917	1-164-097-11	CERAMIC 0.022uF 50V	
				C918	1-124-903-11	ELECT 1uF 20% 50V	
△R763	1-249-397-11	CARBON 22 5% 1/4W		C919	1-164-097-11	CERAMIC 0.022uF 50V	
R764	1-247-830-11	CARBON 910 5% 1/4W		C920	1-124-464-11	ELECT 0.22uF 20% 50V	
R765	1-249-412-11	CARBON 390 5% 1/4W		C921	1-164-097-11	CERAMIC 0.022uF 50V	
△R766	1-249-397-11	CARBON 22 5% 1/4W					
△R767	1-249-393-11	CARBON 10 5% 1/4W		C922	1-162-282-31	CERAMIC 100PF 10% 50V	
△R768	1-249-393-11	CARBON 10 5% 1/4W				< JACK >	
△R769	1-249-423-11	CARBON 3.3K 5% 1/4W					
△R770	1-249-417-11	CARBON 1K 5% 1/4W		CNJ901	1-540-062-11	OUTLET, AC (POLAR)	
△R771	1-249-417-11	CARBON 1K 5% 1/4W					
△R772	1-249-421-11	CARBON 2.2K 5% 1/4W				< CONNECTOR >	
△R773	1-247-706-11	CARBON 330 5% 1/4W		CP902	1-566-690-11	PLUG, CONNECTOR (2.5MM) 2P	
△R774	1-247-688-11	CARBON 10 5% 1/4W					
△R775	1-247-688-11	CARBON 10 5% 1/4W				< DIODE >	
△R776	1-214-789-00	RES, METAL PLATE 0.1					
△R777	1-214-789-00	RES, METAL PLATE 0.1					
R778	1-260-072-11	CARBON 4.7 5% 1/2W		D911	8-719-200-82	DIODE 11ES2	
R779	1-260-076-11	CARBON 10 5% 1/2W		D912	8-719-200-82	DIODE 11ES2	
R780	1-249-407-11	CARBON 150 5% 1/4W		D913	8-719-200-82	DIODE 11ES2	
R781	1-249-431-11	CARBON 15K 5% 1/4W		D914	8-719-200-82	DIODE 11ES2	
R783	1-249-438-11	CARBON 56K 5% 1/4W		D915	8-719-987-63	DIODE 1N4148M	
△R954	1-216-481-11	METAL OXIDE 1.2K 5% 3W F					
△R955	1-247-749-11	CARBON 560 5% 1/2W					
R956	1-249-426-11	CARBON 5.6K 5% 1/4W					
R957	1-249-385-11	CARBON 2.2 5% 1/6W					
R958	1-249-385-11	CARBON 2.2 5% 1/6W					

POWER SUPP

POWER SW

REAR

Ref. No.	Part No.	Description	Remarks
D916	8-719-987-63	DIODE 1N4148M	
D917	8-719-933-41	DIODE HZS6C3L	
D918	8-719-933-41	DIODE HZS6C3L	
D919	8-719-985-53	DIODE HZ4ALL	
D920	8-719-987-63	DIODE 1N4148M	
< TRANSISTOR >			
Q911	8-729-209-15	TRANSISTOR 2SD2012	
Q922	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q923	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q924	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q925	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q926	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R911	1-249-417-11	CARBON 1K 5% 1/4W	
R912	1-249-437-11	CARBON 47K 5% 1/4W	
R913	1-249-433-11	CARBON 22K 5% 1/4W	
R914	1-249-429-11	CARBON 10K 5% 1/4W	
R915	1-249-425-11	CARBON 4.7K 5% 1/4W	
R916	1-249-429-11	CARBON 10K 5% 1/4W	
R917	1-249-417-11	CARBON 1K 5% 1/4W	
R918	1-249-429-11	CARBON 10K 5% 1/4W	
R919	1-249-426-11	CARBON 5.6K 5% 1/4W	
R920	1-249-417-11	CARBON 1K 5% 1/4W	
R921	1-249-426-11	CARBON 5.6K 5% 1/4W	
R922	1-249-396-11	CARBON 18 5% 1/6W	
< RELAY >			
RY901	1-515-701-11	RELAY	
< TRANSFORMER >			
△T902	1-449-993-21	TRANSFORMER, POWER	
< FUSE >			
△F901	1-532-749-11	FUSE, GLASS TUBE (8A)	

*	1-642-685-11	POWER SW BOARD	

< CONNECTOR >			
* CP101	1-565-295-11	PLUG, CONNECTOR 4P	
< SWITCH >			
S101	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER ON/STANDBY)	

Ref. No.	Part No.	Description	Remarks
*	1-642-682-11	REAR BOARD	

< CAPACITOR >			
C801	1-124-927-11	ELECT 4.7uF 20% 100V	
C802	1-162-282-31	CERAMIC 100PF 10% 50V	
C803	1-162-282-31	CERAMIC 100PF 10% 50V	
C804	1-124-477-11	ELECT 47uF 20% 25V	
C805	1-162-191-31	CERAMIC 2.2PF 10% 50V	
C806	1-124-907-11	ELECT 10uF 20% 50V	
C807	1-124-907-11	ELECT 10uF 20% 50V	
C809	1-164-097-11	CERAMIC 0.022uF 50V	
C810	1-136-171-00	FILM 0.33uF 5% 50V	
< CONNECTOR >			
CJ802	1-569-596-11	PLUG, CONNECTOR (2.5MM) 3P	
* CJ803	1-568-826-11	SOCKET, CONNECTOR 7P	
< DIODE >			
D801	8-719-987-63	DIODE 1N4148M	
D802	8-719-987-63	DIODE 1N4148M	
D803	8-719-987-63	DIODE 1N4148M	
< IC >			
IC801	8-759-502-33	IC SI18752	
< COIL >			
L801	1-420-872-00	COIL, AIR CORE	
< TRANSISTOR >			
Q801	8-729-178-42	TRANSISTOR 2SC2784-F	
< RESISTOR >			
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-439-11	CARBON 68K 5% 1/4W	
R803	1-249-419-11	CARBON 1.5K 5% 1/4W	
R804	1-249-439-11	CARBON 68K 5% 1/4W	
R805	1-217-151-00	RES, METAL PLATE 0.22	
R806	1-249-389-11	CARBON 4.7 5% 1/4W	
R807	1-249-409-11	CARBON 220 5% 1/4W	
R808	1-249-428-11	CARBON 8.2K 5% 1/4W	
△R809	1-249-393-11	CARBON 10 5% 1/4W	
R810	1-249-435-11	CARBON 33K 5% 1/4W	
< RELAY >			
RY801	1-515-790-11	RELAY	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

SP SW

SP TM

SURRE SP

VOL

Ref. No.	Part No.	Description	Remarks
*	1-642-690-11	SP SW BOARD *****	
		< CONNECTOR >	
* CP702	1-564-778-11	PLUG, CONNECTOR (2.5MM) 4P	
		< JACK >	
J701	1-563-347-11	JACK, LARGE TYPE (HEADPHONES)	
		< RESISTOR >	
△R733	1-216-431-11	METAL OXIDE 560 5% 1W F	
△R783	1-216-431-11	METAL OXIDE 560 5% 1W F	
		< SWITCH >	
S701	1-572-812-11	SWITCH, ROTARY SLIDE (SPEAKER)	

*	1-642-691-11	SP TM BOARD *****	
		< TERMINAL >	
TM701	1-537-341-11	TERMINAL BOARD (8P SP)	

*	1-642-692-11	SURRE SP BOARD *****	
		< TERMINAL >	
* TM702	1-537-265-11	TERMINAL BOARD	
* TM703	1-537-405-11	TERMINAL BOARD (2P.SP)	
		< CONNECTOR >	
CP701	1-568-739-11	PIN, CONNECTOR (PC BOARD) 4P	

*	1-642-693-11	VOL BOARD *****	
		< CAPACITOR >	
C421	1-164-097-11	CERAMIC 0.022uF	50V
		< CONNECTOR >	
* CJ421	1-568-828-11	SOCKET, CONNECTOR 9P	

Ref. No.	Part No.	Description	Remarks
		< VARIABLE RESISTOR >	
RV405	1-241-816-11	RES, VAR, CARBON 100KX4 (MASTER VOLUME)	

		MISCELLANEOUS *****	
8	1-690-588-31	WIRE, FLAT TYPE (9 CORE)	
11	1-575-666-11	WIRE, FLAT TYPE (5 CORE)	
14	1-690-114-11	WIRE, FLAT TYPE (7 CORE)	
15	1-590-487-11	WIRE, FLAT TYPE (17 CORE)	
* 16	1-590-769-11	WIRE, FLAT TYPE (7 CORE)	
* 57	1-590-769-11	WIRE, FLAT TYPE (7 CORE)	
△T901	1-450-808-11	TRANSFORMER, POWER	
△CNP901	1-551-478-00	CORD, POWER	

		ACCESSORIES & PACKING MATERIALS *****	
	1-693-020-11	REMOTE COMMANDER (RM-P621) (AV621)	
	1-693-023-11	COMMANDER (STANDARD) (RM-U521) (AV521)	
	3-707-584-31	COVER, BATTERY (AV521)	
	3-754-877-21	MANUAL, INSTRUCTION (ENGLISH) (AV521)	
	3-754-914-21	MANUAL, INSTRUCTION (ENGLISH) (AV621)	
	4-949-866-02	INDIVIDUAL CARTON (AV521)	
	4-949-867-02	INDIVIDUAL CARTON (AV621)	
*	4-949-872-01	CUSHION	

		***** HARDWARE LIST *****	
#1	7-682-548-04	SCREW +BVTT 3X8 (S)	
#2	7-682-561-04	SCREW +BVTT 4X8 (S)	
#3	7-682-950-01	SCREW +PSW 3X12	
#4	7-682-548-09	SCREW +B 3X8	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

